THE AMERICAN WEST

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Cover: "Searching the Most Opposite Corners and Quarters of the World," an engraving from Theodore de Bry's 1594 multi-volume work America, *symbolizes the marvels and perils faced by explorers in the unknown lands and seas of the New World. The mariner in the illustration is Portuguese navigator Ferdinand Magellan, conqueror of the Pacific, circumnavigator of the globe, and discoverer of the "strait that shall forever bear his name." For an account of an English seaman who followed Magellan into the Pacific,* *see pages 4–13 of this issue.*

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THE
AMERICAN WEST
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Clutching a bundle of seedlings, a slowly disintegrating grizzly bear totem of British Columbia's Haida Indians embraces the natural world that inspired its creator—a world that will soon reclaim it. An article on the subject appears on pages 14–19.

JOHN AND CAROLYN SMYLY

He Founded the First "New England"

Forty years before the Pilgrim fathers set foot on Plymouth Rock, Francis Drake claimed a New Albion for his Queen—in California.

by Elizabeth B. Goodman

QUEEN ELIZABETH I called him her "little pirate." His Spanish enemies dubbed him *El Draque* (the Dragon), and the Spanish ambassador to England damned him as "the master thief of the unknown world." Edmund Drake, his father, christened him Francis.

Buccaneer, explorer, and war hero, Captain Francis Drake became the greatest of the Elizabethan seamen, the first Englishman to circumnavigate the globe, and the founder of the British naval tradition. And with his landing in 1579 on the shores of "Nova Albion," he gave England one of her earliest claims to the New World; precisely where in northern California this landing took place remains, nearly four hundred years later, one of the most fascinating and controversial questions in western American history.

Born in 1541 (or 1542 or 1543) as the eldest of twelve boys, adventure-loving Francis Drake seemed destined from childhood for the seafaring life. When Francis was about eight, his father, a Protestant lay preacher, moved the family from strongly pro-Catholic Devon in south England to the more hospitable eastern county of Kent, where he secured part-time employment as a chaplain in King Edward's navy. The family set up housekeeping in the hulk of an abandoned naval vessel, and before long young Drake's life was inextricably attuned to the flow and ebb of the tides and the sweep of winds across the lower Medway. Before reaching his teens, he was apprenticed to the captain of a small coasting vessel; during the next several years he mastered the art of sailing the capricious waters of the English Channel and the crowded estuaries of the Medway and Thames rivers. So proficient a mariner did Francis become that when the captain died, he left his ship to his eighteen-year-old apprentice.

Drake perfected his talents as a seaman and navigator in the service of his kinsman John Hawkins, a wealthy and influential Plymouth shipowner. Under Hawkins, he added to his love of the sea a second passion—an intense dislike of the Spanish—which began to color all his actions. In 1567–1568, Hawkins, with Drake along as commander of one of his ships, had engaged in a slaving and trading expedition between West Africa and the Caribbean. Englishmen—even slave traders—were only grudgingly tolerated in this arm of the Spanish Empire, but when Hawkins's storm-damaged vessels needed repairs, he boldly put in at San Juan de Ulua, a tiny island anchorage near Vera Cruz on the Mexican coast. At first the Spanish commander was powerless to contest Hawkins's presence there, but the very next day a powerful thirteen-ship armada arrived from Spain, abruptly swinging the balance. The English captain negotiated an uneasy truce and exchanged hostages to guarantee it, but before two more days had passed, without warning or provocation, the Spanish viceroy killed his hostages and attacked. Of the ten English ships in the roadstead, only two escaped—one commanded by Hawkins, the other by Drake. Most of the profits of the expedition were lost, to say nothing of several hundred English sailors killed or condemned to slave galleys. In later years, when his motives in robbing Spanish galleons and plundering Spanish towns were questioned, Drake always answered that he was only retrieving what the Spaniards had unlawfully stolen from him.

By his late twenties Drake was ready to begin organizing small expeditions of his own to the Caribbean, but he would no longer be returning as a peaceful trader. To his passion for the sea and hatred for Spain, a third element had been added—a determination to enrich himself at his enemy's expense. In 1572, following two reconnaissance expeditions into Spanish waters, Drake embarked on a daring free-booting adventure—a raid on the port of Nombre de Dios on the north shore of Panama. Wealth from Spain's overseas empire, transported by galleon to Panama City, poured across the narrow isthmus and accumulated at Nombre de Dios while awaiting transshipment to Spain. Here indeed was a tempting prize! Drake had meticulously spied out the mule train route across the isthmus and somehow acquired a map of the town.

Approaching Nombre de Dios by night in small boats, Drake's seventy-man force carried out a lightning attack on the surprised and disorganized garrison and quickly took possession of the governor's mansion, where they burst into a storeroom containing silver ingots stacked twelve feet high. But what started out so successfully ended in failure. Before they could seize the treasure house believed to hold the Spanish hoard of gold, a tropical downpour brought all action to a virtual halt—and then Drake collapsed from a severe leg wound. His men picked him up and fled without the treasure.

First Englishman to circumnavigate the globe, Francis Drake figures prominently in western American history for his 1579 landing on the shores of "Nova Albion"—a name derived from an old Roman term for the chalk headlands of England.

THE BETTMANN ARCHIVE

THE BETTMANN ARCHIVE

In 1577, wishing to repay Philip II of Spain "for divers injuries that I have received," England's Queen Elizabeth gave Francis Drake her secret blessings and backing for a privateering voyage into the Spanish waters of the Pacific. Drake parlayed the opportunity into a three-year voyage around the world.

Still determined to wrest a fortune from this voyage, Drake organized an ambush on a gold-laden mule train crossing the isthmus. Again, failure—this time due to the premature clatter of a drunken sailor. The effort, however, was not wasted. On February 11, 1573, Cimaroon natives led Drake to the peak of a ridge of the Cordilleras where they had fashioned a lookout platform atop "a goodly and great high tree." From this vantage point the mariner gazed back on the familiar waters of the Caribbean—and ahead over the vast spread of the Pacific Ocean, thus becoming the first Englishman to sight the enormous body of water that the Spaniards considered their private domain. He fervently prayed that God might give him "life and leave to sail once in an English ship on that sea." The keystone of Drake's ambitions had now fallen into place, and all the elements were present that six years later would carry him north on the Pacific to a landing on the coast of California.

A SECOND ATTEMPT by Francis Drake to ambush a mule train, this time at the very doorstep of Nombre de Dios, was wildly successful. The loot his men carried off more than paid the costs of the expedition, and Drake returned to England a wealthy man.

By November of 1577, Drake, now backed by a syndicate of prominent politicians, was ready to put to sea again. No record of royal authorization for this ambitious expedition has been found, but Queen Elizabeth apparently gave her secret approval.

Drake's sailing instructions were a web of commissions within commissions. The publicly announced destination of his voyage was Alexandria, Egypt; its purpose, the negotiation of a trade agreement with the Ottoman Empire for spices. Sailors were recruited on this basis.

The syndicate's private instructions to Drake, however, were to sail far to the south and west to the tip of South America, through the dreaded Strait of Magellan, and into the Pacific (a voyage for which no sailor would have willingly signed on). He was then to seek the land called *Terra Australis Incognita,* thought to lie still farther to the south, where he was to conclude trade agreements with the rulers for the sale of English goods. The syndicate undoubtedly regarded the Spanish coasts of South America as out of bounds.

By 1577, however, England's relations with Spain had reached a new low. Queen Elizabeth apparently had decided the time had come to repay the Spanish monarch, Philip II, for his unfriendly acts and continual harassment, and she saw in Drake's voyage the ideal opportunity. Since she did not wish to appear personally involved, she instructed her secretary of state, Sir Francis Walsingham, to send for Drake.

"I would gladly be revenged on the King of Spain for divers injuries that I have received," Elizabeth is said to have told the mariner. Drake must have been overwhelmed at the prospect. Here was the opportunity to satisfy all his great desires—a long sea voyage full of adventure, revenge on the Spanish, the possibility of sailing the Pacific, and the likelihood of further enriching himself. All that with the Queen's blessing!

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Setting out with five ships, Drake found his command reduced to one—the* Golden Hinde, *right—by the time he reached the west coast of South America in 1578. Raids on coastal ports and the capture of a treasure galleon netted him a fortune in gems and precious metals, including "26 tuns of uncoined silver."

According to his verbal agreement with Elizabeth, Drake would round the tip of South America, turn *north,* raid the Spanish settlements along the Pacific, and seize any treasure ships that crossed his path. Probably only Drake and Walsingham were privy to this agreement, and the Queen threatened that if anyone reveal her instructions, "they should lose their heads therefor"—and that particularly "of all my men my Lord Treasurer [Burghley, who headed the Peace with Spain party] should not know it."

Drake conveniently considered the Queen's commission predominant over any orders from the syndicate.

On the eve of his great voyage, Captain Francis Drake was still in his mid-thirties. Short of stature but barrel-chested, with a ruddy complexion, brown hair, a reddish-brown beard, and sparkling gray eyes, he made an imposing figure.

A master seaman and a proven leader, he was at the same time egotistical and ambitious, craving popularity and highly susceptible to flattery. He could not bear to be crossed and flew into violent rages if his wishes were opposed. Nevertheless, there was an unexpectedly gentle side to his nature. He was generally kind to the men who served under him, and unlike most contemporaries in his business, he treated his captives (even the hated Spanish) with generosity. When seizing vessels from the enemy he often reimbursed captain and crew so they would not be left destitute.

At "about 5 of the clocke in the afternoone" on November 15, 1577, Francis Drake's fleet sailed out of Plymouth Harbor, five ships strong. His crews totaled 164 men, including ten wealthy young gentlemen along for the adventure. The great quantity and variety of weapons carried in the ships would have alerted any sharp-eyed observer that this was no simple trading expedition. Drake, as "Captain-General," commanded the flagship, the eighteen-gun, one-hundred-ton *Pelican*. Three other ships, the *Elizabeth,* the *Marigold,* and the *Swan,* ranged in size from thirty to eighty tons; the tiny pinnace *Benedict* measured only fifteen tons. Later Drake gave his smallest ship to a Portuguese trader in exchange for his forty-ton vessel, seized off West Africa.

In September 1578, the *Pelican,* by then renamed the *Golden Hinde,* sailed into the Pacific accompanied by the *Elizabeth* and the *Marigold*. (The two other ships had been scuttled along the east coast of South America.) It had been a relatively easy passage of sixteen days through the Strait of Magellan, but the Pacific proved anything but peaceful. The *Golden Hinde* tossed about like a cork for over a month. Driven far south, Drake found no great land mass, only a scattering of lonely rocks and islands, and the perpetually storm-tossed waters of what today is called Drake's Passage.

In late October the weather finally permitted the Captain-General to sail north in obedience to his queen's instructions. By this time the *Golden Hinde* was on her own. The *Marigold* had disappeared, apparently sunk with all hands, and the *Elizabeth,* separated from the flagship in a storm, had put back toward England, arriving at Plymouth a year later.

Drake, superbly self-confident, never considered turning back. He had on board a competent Portuguese pilot, Nuño da Silva (captured off the Cape Verde Islands), who was familiar with South American coastal waters. His crew was

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With his leaking ship buffeted by north Pacific storms, Drake found haven in "a conuenient and fit harborough" on the shores of California, somewhere near or on San Francisco Bay. The Indians proved friendly, and upon the insistence of their king the mariner modestly accepted "the scepter, crowne, and dignity of said land."

young, tough, and well disciplined. All aboard had witnessed a sobering spectacle at Port St. Julian, near the entrance to the Strait of Magellan, where Thomas Doughty, one of the gentlemen-adventurers, was tried for inciting mutiny. When Doughty admitted that before their departure he had leaked information regarding the voyage's probable real purpose to the Lord Treasurer, Drake considered himself justified in enforcing the Queen's threat. After Doughty lost his head, no one aboard the *Golden Hinde* questioned Drake's authority or decisions.

For six months Drake worked north along the South and Central American coasts, conducting hit-and-run raids at every promising port along the way. After he plundered ships anchored in the harbor of Valparaiso, word went out that somehow *El Draque* was loose in the Pacific—"a thing never heard of or imagined," one frantic official wrote to his superior in Spain. But lines of communication were poor in this remote outpost of the Spanish empire, and Drake bucketed on north, always a jump ahead of the Spanish. His greatest prize was the galleon *Nuestra Señora de la Conception*, overtaken at sea near the equator while enroute to Panama, which yielded "a store of fruits, concerves, sugar, meal . . . beside a quantity of jewels and precious stones: 13 chests of plate; 8 poundweight of gold; 26 tuns of uncoined silver; 2 large silver and gilt bowls, valued in all to 360 thousand pezoes." With other loot acquired on this voyage, the investors in Drake's expedition were ultimately paid off at forty-seven pounds for every pound invested.

By now Drake knew he could never return to England through the Strait of Magellan; every Spanish ship on the west coast of South America was looking for him. So, after sacking Guatulco on the Mexican coast, Drake headed west 1,500 miles into the open sea, then north into waters seldom penetrated even by the Spanish. Some authorities believe he was searching for the mythical Strait of Anian, which for several hundred years was thought to connect the Pacific and Atlantic oceans somewhere in the unknown north. The *Golden Hinde* may have sailed as far north as British Columbia—certainly she went as far as Oregon—before Drake gave up his search for a northwest passage.

The small ship was so loaded with bullion and barnacles that she sailed more and more sluggishly. When she sprang a serious leak, Drake knew he must soon find a sheltered bay suitable for careening and repairs. He inched south again, seeking to escape the "thicke mists and most stinking fogges," as recorded by the ship's chaplain Francis Fletcher. A short time later Fletcher reported that "in 38 deg. 31 min. we fell with a conuenient and fit harborough, and June 17 [1579] came to anchor therein, where we continued till the 23 day of July following." The furor over just where that "conuenient and fit harborough" was located goes on to this day.

WHEN DRAKE RETURNED to England, the *Golden Hinde*'s logbook, Drake's journals and maps, and scenes painted by his nephew, John Drake, were placed in Queen Elizabeth's personal archives in the Tower of London. They were never seen again. Oddly, Chaplain Fletcher's original notes

CULVER PICTURES

Heading west across the Pacific and Indian oceans, Drake returned to England—and to fame and knighthood —in 1580. The engraving at right is romantic but inaccurate: the actual dubbing was performed at Elizabeth's invitation by a French ambassador to England. Later, for his role in the defeat of the Spanish Armada, Drake would achieve new honors.

on the five weeks' stay in California also vanished, though other of his original notes are extant. Nearly all of the important information on Drake's California visit comes to us from two secondary sources. One, an insert in Richard Hakluyt's *The Principall Navigations, Voiages and Discoveries of the English Nation,* was entitled "The Famous Voyage of Sir Francis Drake into the South Sea," published in 1589; the other was *The World Encompassed by Sir Francis Drake,* based on reports of Chaplain Fletcher. This was not published until 1628, though it was written some years earlier.

A third item that figures prominently in all discussions of Drake's California anchorage is a tiny map called *Portus Novae Albionis,* an inset in the margin of a large map, *Vera Totius Expeditionis Nauticae,* executed by the sixteenth-century Flemish cartographer Jodocus Hondius. The *Portus* has been used by modern researchers to bolster their arguments in favor of several different possible anchorages, advocates of each site adjusting the map's scale and orientation to fit the existing landscape.

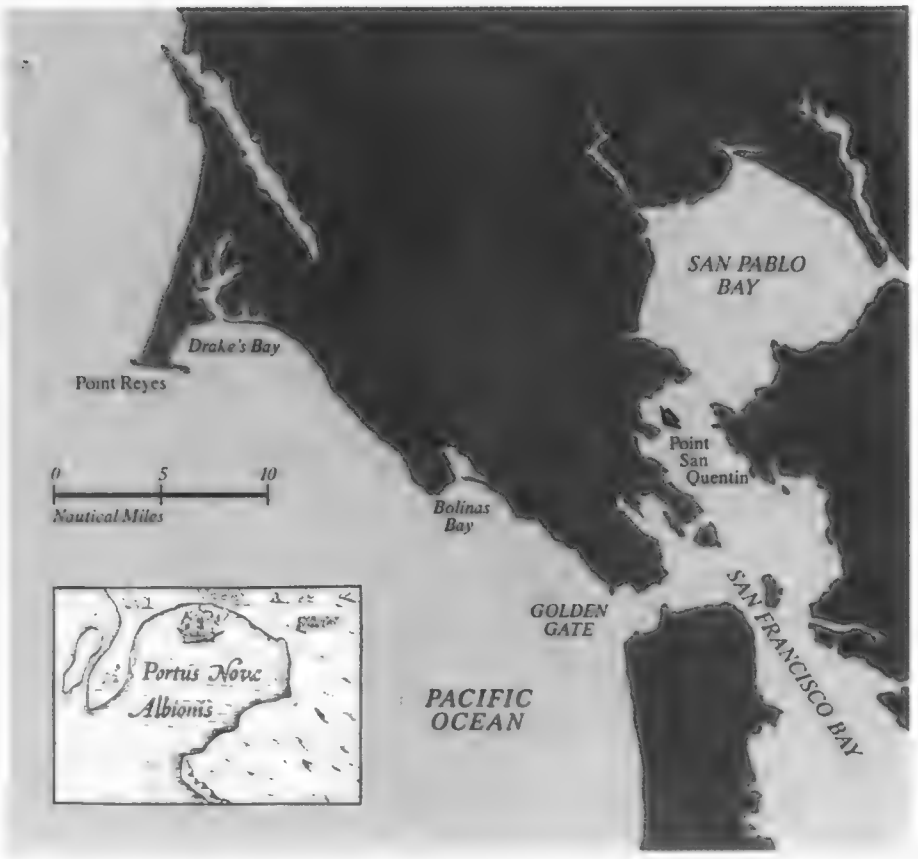
Unless the missing records from Queen Elizabeth's archives come to light, it will perhaps never be known for sure exactly where Drake dropped the *Golden Hinde*'s anchor, but no one disputes the proposition that he spent five weeks in 1579 somewhere on or near San Francisco Bay.

Drake remained at anchor for three days, and three times during this period an Indian in a canoe paddled out to the ship and delivered "a long and tedious oration," "using in the deliurie thereof many gestures and signes." On the fourth day Drake moved the ship "farther in" and commenced building a small fort "for the defence of our selves and goods." The Indians proved to be so docile, however, that the fort was not necessary for protection, but it proved a useful storage place for the bullion, which had to be unloaded before the ship could be careened.

Numerous local Indian visitors soon began to arrive, many bringing gifts. Presently a man called Hióh, thought by the English visitors to be the king, appeared with a large retinue. Indians and Englishmen convened for jovial feasts, speech-making, and songs and dances. Drake participated in what was perhaps only an effusive welcoming ceremony, but since it involved offering him a crown and scepter, he concluded the Indians were bestowing the kingship of their country on him. He graciously accepted in the Queen's name, and since neither party could understand the other, everyone present was quite pleased.

Alfred L. Kroeber, the late anthropologist from the University of California at Berkeley, an authority on California Indians, concluded that the Indians Drake encountered were Coast Miwok. Their habits, customs, clothing, and houses as described in the explorers' accounts closely match the known life-style of this group. The men went naked, though "their king's holidaies coate was made of conies' skins," and he wore "a cowl of knitwork" on his head. This headgear was actually a type of woven basket. The women were attired in shapeless dresses made from rushes, often with a deerskin thrown over their shoulders.

The Indian houses were built partly underground. The



The exact location of Drake's "conuenient and fit harborough" has yet to be established beyond doubt. Three California sites have received the most support: Drake's Bay at Point Reyes, Bolinas Lagoon to the south, and near Point San Quentin in San Francisco Bay. Which one is the "Portus Novae Albionis" shown on a 1589 world map (inset, left)?

above-ground portion was of wood construction, conical in shape, and covered with earth. Kroeber identified a number of words quoted by Fletcher *(hióh, patah, tabah)* as belonging to the Coast Miwok language.

The Indians had for weapons only the bow and arrow. The English visitors found them "submissive" and "tractable," and interpreted their sobbing, tearing of hair, and beating of breasts upon Drake's departure as evidence of their "loving natures."

Thus the five-week interlude on the California coast was relaxing and uneventful. The crew scraped barnacles, cleaned and caulked the ship's bottom, and repaired the leak. They gathered quantities of food and, as departure time drew near, stored fresh water. The *Golden Hinde* would touch briefly at the Farallon Islands, outside the Golden Gate, then head boldly southwest; part of the booty Drake had obtained from a Spanish ship was a priceless set of charts that would enable him to follow Magellan's route across the Pacific.

At some point Drake and a group of his men went off on a short exploring expedition somewhere in the area of San Francisco Bay. We do not know how long they were gone or in what direction they traveled. *The World Encompassed* relates, "The inland we found to be farre different from the shoare, a goodly country, and fruitful soyle, stored with many blessings fit for the use of man: infinite was the company of very large and fat Deere which there we saw by thousands . . . in a heard; beside a multitude of a strange kinde of Conies. . . . The people eate their bodies, and make great account of their skinnes." The conies, too, have produced future interminable arguments. Were they ground squirrels, gophers, or rats?

Drake named his fair and far-off land Nova Albion, "and that for two causes; the one in respect of the white bancks and cliffes, which lie toward the sea; the other, that it might have some affinity, euen in name also, with our own country, which was sometimes so called."

By the third week of July the *Golden Hinde* had been readied for sea. But "before we went from thence, our General caused to be set up a monument of our being there, as also of her majesties and successors right and title to that kingdome; namely, a plate of brasse, fast nailed to a great and firme post." The mariners hacked a jagged hole in the lower right corner of the plate and here was placed "her highnesse picture and armes, in a piece of sixpence currant English monie." With this last act of possession Drake sailed for home.

THE GOLDEN HINDE returned to Plymouth on September 26, 1580, having sailed west through the Indian Ocean and thence around Africa by way of the Cape of Good Hope. Drake had achieved his four great ambitions: he had completed a sea voyage lasting three years; for eighteen months of that time his ballast was twenty-six tons of Spanish silver, a satisfying portion of which belonged to him; he had sailed an English ship on the Pacific Ocean; and he had struck repeatedly at Spanish possessions, always emerging the victor.

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In 1936, Beryle Shinn of Oakland, California (shown here with historian Herbert Eugene Bolton), accidentally unearthed what many believe to be the "Plate of Brasse" Drake left in California in 1579. Like the "Portus Novae Albionis" map, the plate has generated much controversy. It now reposes in the Bancroft Library at the University of California, Berkeley.

Drake's ego would no doubt have been greatly inflated if he could have known that almost four hundred years after his landing in Nova Albion men would still be wrangling over many aspects of his visit, that a bay north of San Francisco would be named for him, and that on a gusty day in March 1975 several hundred thousand Californians would watch a replica of his *Golden Hinde* sail through the Golden Gate into San Francisco Bay.

The mysterious bay that has so eluded identification must satisfy several conditions to qualify as the one where Drake anchored: it must adhere closely to latitude 38° north; it must be associated with white cliffs; it must be within a day's sailing time of the Farallon Islands; it must be an area once frequented by Indians; and it must be sufficiently protected to make careening and repairs feasible.

It would be helpful if the bay's contours exactly matched the *Portus* inset. But over the centuries sandbars along the coast and in San Francisco Bay have shifted, land contours have changed, and silting has taken place. Moreover, the scale to which the drawing was made is unknown. It is now evident that this map alone will never pinpoint Drake's landing site. Some authorities believe it was never intended to be totally accurate but is simply Hondius' own idea of what the bay might have looked like.

Today three sites are considered as being the most likely candidates for Drake's anchorage: Drake's Bay at Point Reyes on the California coast, approximately twenty nautical miles to the northwest of the Golden Gate; Bolinas Lagoon, some twelve miles southeast of Drake's Bay; and the waters off Point San Quentin, on San Francisco Bay and about eight miles north of its entrance. [See map on page 10.]

All three of the sites satisfy the qualifying conditions to a greater or lesser degree. The Point Reyes site has been speculatively associated with the Drake anchorage by historians since the late 1800s, and its topography compares favorably with the "white bancks and cliffes" that the explorers found in Nova Albion, as well as with the south England coast that they had been reminded of.

The Bolinas Lagoon site received added credence as a possible anchorage in 1974, when Dr. V. Aubrey Neasham of California State University at Sacramento and state archaeologist William E. Pritchard announced they had excavated what appeared to be the remains of an old fort. Samples of tar and slag found there are at the Smithsonian Institution awaiting analysis.

The "Drake's Plate of Brass," a famous artifact which might have provided the key to Drake's anchorage, has paradoxically instead only added fuel to the controversy. The plate, which bears an inscription similar to that described in *The World Encompassed*, was discovered in 1936 by Beryle Shinn, a department store clerk from Oakland, who at the time was unfamiliar with either California history or Drake. Picnicking one day on a hill near Port San Quentin on north San Francisco Bay, he began picking up rocks to roll down the slope. Finding an encrusted piece of metal sticking out of the soil, he worked it loose, then decided it would be about the right size for repairing a hole in his car door.

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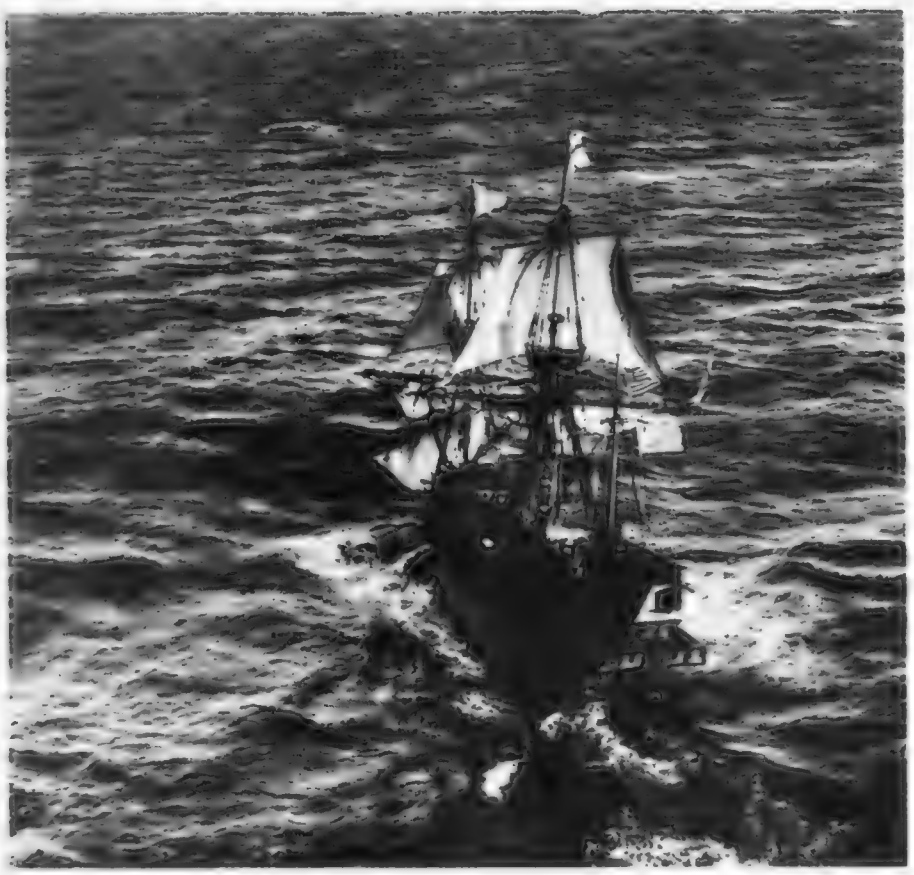

During 1974–1975 interest in Francis Drake received new impetus with the five-and-a-half-month voyage from Plymouth, England, to California of the **Golden Hinde II**, *a 102-foot re-creation of a typical Elizabethan sailing vessel. She is shown here upon her arrival off San Francisco Bay on March 8, 1975.*

Later, when Shinn got around to cleaning the plate, he found it to be of brass and that it apparently bore the numbers 1579 and the word DRAKE on its surface. On the advice of a friend, Shinn took the plate to historian and Drake expert Herbert E. Bolton at the University of California, Berkeley. The professor did not venture to confirm the plate as genuine until he had received reports from three east coast experts on metallurgy and spectroscopy analysis techniques. They reported the plate was solid hammered brass, typical of sixteenth-century metalworking techniques. It contained impurities far in excess of those present in modern rolled brass, and an analysis of particles of mineralized plant tissue found embedded in the plate showed them to be very old. Their report concluded that "on the basis of the . . . findings . . . it is our opinion that the brass plate . . . is the genuine Drake plate."

That, however, did not necessarily mean that Drake had left the plate in the same spot where Shinn found it. Soon after news of Shinn's discovery was made public, chauffeur William Caldeira claimed that *he* had found the plate three years earlier by a crossroad near Drake's Bay and later threw it from his car near Point San Quentin. Some experts have accepted Caldeira's story; others have discounted it. In any event, evidence of carbon found on the plate's surface indicates it had lain in an Indian midden for a long period of time. The Miwok Indians may have removed the plate from its post and carried it away some distance, making arguments over the "discovery" site irrevelant.

The area where the plate was believed to have been uncovered was thoroughly searched for the sixpence missing from the lower right corner, but no trace of it could be found. However, in June 1974 anthropologist Charles Slaymaker was working a Miwok Indian site near Novato, not far from Point San Quentin, when he turned up a blue trade bead of Drake's period and a sixpence dated 1567. The coin has gone to the British Museum for authentication, though it is unlikely that it can be proven to be the sixpence missing from the plate.

The eminent maritime historian Samuel Eliot Morison caused a mild sensation among Drake devotees when his *European Discovery of America: The Southern Voyages* appeared in 1974. He discounted the plate as a hoax perpetrated by some "collegiate joker," arguing that its chemical composition and the language and lettering of the message are not of the Elizabethan era. Despite Morison's claims, most local researchers stick to their belief that the plate is genuine.

THE MOST COLORFUL, though not necessarily the most significant, of recent happenings connected with Drake's California visit was the arrival of the *Golden Hinde II* in San Francisco Bay in March 1975. Built in a tiny shipyard in the Devon fishing village of Appledore, the ship sailed from Plymouth in September 1974 and reached California via the Panama Canal. (Lloyd's of London would not insure passage through the Strait of Magellan.)

"You have heard that she is an exact replica of the original

DAVID MUENCH

Perhaps these headlands on California's Point Reyes Peninsula are the "white bancks and cliffes" that Drake found in Nova Albion. But conclusive proof as to whether Drake anchored here or elsewhere must await new documentary or archaeological evidence. The search back through history continues.

Golden Hinde," says first mate Chris Daniel. "If you will open the English dictionary, I think you will find that a replica is constructed by the original artist."

Webster defines a replica as "a very close reproduction or copy," and there is no way of proving that the *Golden Hinde II* is this. Sixteenth-century shipbuilders worked without plans, basing their work on standard formulas and long experience. And although the original *Golden Hinde* was preserved in a drydock near London for eighty years, no authentic drawing of the ship survives. To reconstruct plans for the ship, naval architect Christian Norgaard spent three years studying sixteenth-century shipbuilding methods, surviving illustrations of ships from that era, and all known descriptions of Drake's *Golden Hinde*.

Two California businessmen, Albert Elledge and Art Blum, financed the ship's construction. The wood is primarily English oak and elm, though an African hardwood had to be used for planking. The sails are cut from hand-woven flax. Whenever possible, sixteenth-century tools and shipbuilding methods were used.

The crew of the *Golden Hinde II* dined on food very similar to that offered Drake's men, though the sixteenth-century explorers never enjoyed powdered milk or eggs packed in water glass. Nor did Drake have gas for cooking, an auxiliary engine to help out in a pinch, a two-way radio, fire extinguishers, or bunks on the gun deck. But then, Captain Adrian Small of the *Golden Hinde II* did not eat his meals off solid silver plate to the music of viols, either. His Queen Elizabeth did not present him with perfumed waters to sweeten his cabin, he did not carry twenty-six tons of silver as ballast, and he had to do with a crew of fifteen men instead of the eighty who started out with Drake.

After a brief return to sea in late 1975 to star in a Hollywood period movie, the *Golden Hinde II* will again moor at Fisherman's Wharf in San Francisco as a permanent museum ship. The stout little vessel will be a lasting reminder that one summer day, forty-one years before the founding of America's Plymouth Colony, a British mariner sailing on a Spanish sea gazed upon nearby shores and called them "New England."

FOR FURTHER READING

The literature on Francis Drake is much too vast to receive more than cursory mention here. Some biographies currently in print which provide overall perspective on Drake include Ernle Bradford's *The Wind Commands Me* (1965), George Malcolm Thomson's *Sir Francis Drake* (1972), and T. W. Roche's *The Golden Hind* (1973). For excellent accounts of Drake's voyage of circumnavigation by mariner-historians who actually retraced his route, see *The European Discovery of America, Volume II* by Samuel Eliot Morison (1974) and "Queen Elizabeth's Favorite Sea Dog" by Alan Villiers in *The National Geographic*, February 1975 issue. Another fine reference work is *Sir Francis Drake's Voyage Around the World* by Henry R. Wagner (1926). The most thorough presentation of the various schools of thought on Drake's California anchorage appears in a special Fall 1974 issue of *The California Historical Quarterly* (available from the California Historical Society, San Francisco, $3.50).

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JOHN AND CAROLYN SMYLY

KOONA

Life and Death of a Haida Village

by John and Carolyn Smyly

THE EAGLE was one of those born at Koona. He is a totem. Long ago, when Koona was the winter home of five hundred Haida Indians, an eagle was needed to mark a small gravehouse at the western end of the village. Stacked inside the gravehouse were many carved and painted boxes, each containing the bones of an Eagle person from the community. Eagle chiefs had their own splendid tombs at the top of mortuary poles, but ordinary family members were laid to rest in the little gravehouses. A carving was needed to show that these people belonged to the Eagle social group, or phratry, of the Haida people.

An artist, his name unknown to us, cut a block of red cedar more than seven feet in length and almost three feet in diameter, and using an axe and long-handled adze, roughed out the shape of the eagle's body and wings. With a chisel, a smaller hand adze, and a curved knife, the artist and his assistants smoothed the surface and carved the deep lines of the eyes, the beak, and the feathers. Then they painted the figure: white for the head and neck, and black for the body and wings, like the great bald eagles which float on the air currents above the Queen Charlotte Islands. The eyes of the eagle were particularly important: these were made round and bulging, fixed open in a permanent stare, and outlined in crimson.

The eagle was raised to the roof of the gravehouse, where a stout wooden post was driven upwards into his body to hold him to his perch. Over many years the weather buffed and polished him to silver-gray.

For a long time the eagle stood, an unsleeping sentry over the misty forest and the long row of Haida houses, which swept away in an arc to his left until they rounded the end of the bay and faced him again over the water. Then Koona was abandoned. The gravehouse, upon which the eagle had perched, decayed, and the graveboxes within, containing the bones of the Eagle family, melted into the soil. The forest grew back.

In 1971, a lumber camp made its headquarters on the peninsula, and a logging road was bulldozed straight through the village and down to the beach. The long quiet was broken by voices, the growl of heavy motors, the splash of logs into the bay. After eighty years, men came again to Koona.

But those born at Koona had gone.

The eagle now stands incongruously upon his tail in a storeroom of the Provincial Museum, Victoria. To some he is merely a wooden bird, rather crudely carved by some standards, and misproportioned. To others, however, he is awesome, magnificent. Artists admire him for the deep, strong carving, and power and simplicity of the design. Anthropologists admire him for the complex social and religious organization which he symbolizes. Collectors and dealers admire him, in part at least, for his enormous potential value on the art market. Others admire him without in the least knowing why. Such is the power of the Haida artist.

A small number of totem poles and memorial carvings like the eagle, together with archaeological evidence sifted from the shell middens of long-occupied sites, surviving tribal legends, notations made by anthropologists, and the few startling photographs made by pioneer photographers are all that remain for us as working materials for a written history of Koona and other Haida villages. From these sources the broad outlines of a story may be traced. But many of the finer details have faded into the past until a complete under-

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This article is adapted from material in The Totem Poles of Skedans *by John and Carolyn Smyly, just released by the University of Washington Press in Seattle. Also published in Canada by Hancock House, Saanichton, B.C., under the title* Those Born at Koona: The Totem Poles of the Haida Village Skedans. © *by John and Carolyn Smyly.*

standing and appreciation of the old ways is no longer possible.

We do not know exactly where the coastal Indians came from originally, or when or why they left their homeland. Almost certainly arriving from Asia, they seem to have crossed by way of the Bering land bridge in a series of gradual, almost imperceptible migrations in search of food. Those who settled eventually upon the Queen Charlotte Islands of British Columbia and the southern half of Prince of Wales Island, now part of Alaska, are known as the Haida.

Once they established themselves in these bountiful islands, the Haida fell into the rhythm of the seasons, migrating like birds in spring and autumn. Summer found the people from the village of Koona scattered among a number of temporary camps where food could be found in variety and abundance. Each family group claimed a certain beach where shellfish could be gathered, or a sun-dappled stream where fish could be netted, trapped, or speared. The women sought birds' eggs, and picked berries, roots, and bark. The men hunted animals and birds, fished for halibut and cod in the sea, and harpooned the sea-mammals for their meat, oil, and furs. The harvest of the summer was preserved for the winter; dried, smoked, or packed in oil.

Then, when the winds rose in a different quarter and the autumn rains came, the Indians returned to the greater protection of their winter village, sheltered within a bay on the northeastern coast of Louise Island. Theirs was a bay almost unnaturally perfect in shape, like a basket turned to the south to trap the sun. Fresh water in the form of a creek fed into the basin at the western corner.

Back in the shelter of their substantial cedar-planked houses, the people of Koona began their season of feasts and entertainments. High-born families sent invitations to the high-born of other villages. Guests came and were honored with speeches and many gifts. As the great fires leaped from the central hearth and sparks rose to the smokehole in the roof to be whisked into the wet night, costumed dancers moved through the intricate steps they had been at such pains to learn. Family histories were retold, lovingly, and without haste. Honor was paid to the dead and to the living far into the night, week after week.

The days were filled with making and mending chores, and it was here that the Haida, like all the coastal tribes, demonstrated a particular genius. Wood was the common denominator for all things manufactured. Every part of a tree might be used: roots, inner bark, twigs, and trunk.

Winter home for families of the Raven and the Eagle, the Haida village of Koona on British Columbia's Louise Island once sheltered half a thousand residents—but was already in decline when photographed here in the 1870s.

BY GEORGE M. DAWSON; GEOLOGICAL SURVEY OF CANADA

The heavy house planks and posts had been split from logs well over a hundred feet in length. Canoes were hollowed from red cedar logs, then steamed and spread to a distinctive and time-tested design. The storage boxes holding the winter's supply of food were made from thin planks, which had been scored deeply at the corners, then steamed, bent into shape, and sewn together and fitted with bottoms and lids. Tool handles were shaped from forked branches or roots, their cutting blades being fashioned from stone fragments, animal teeth, or shells. Clothing, baskets, mats, and rain hats were woven from spruce roots or the supple inner bark of the cedar.

After working continually with wood—cutting, splitting, steaming, and shaping—it was very natural that at some time in history the Indians should begin to decorate it as well. When a flat surface, like a box or a house front, was to be ornamented, designs were incised and painted. But tools and utensils, masks, rattles, bowls, and spoons gave the artisans an opportunity for employing sculpture in depth. The Haida carved the likenesses of the forms they saw around them: the beaver, wolf and bear, whale and seal, birds of the air, the natural and supernatural phenomena that they had seen or heard about from other tribes.

SEASON FOLLOWED SEASON, and Haida life followed its timeless pattern. Then, in the last half of the eighteenth century, European traders appeared in their sailing ships, like great, white birds rising out of the sea. Metal-bladed tools passed quickly in trade and soon became plentiful among the Haida. Wood carvings, while retaining their traditional forms, could now be made much more quickly, and therefore increased in size. The great age of the Haida totem poles was at hand—towering, elaborately carved house-front posts, depicting the genealogical crests of the owners and their families; tall memorial poles, each usually bearing a single carved figure below and the representation of a property hat or whale's fin above, commemorating dead villagers of high rank; and shorter memorial poles topped with horizontal carved panels, serving as elevated tombs for departed chiefs. Inside some dwellings were smaller house-posts displaying the owner's crest in a position of honor.

The Spanish and English explorers of the early nineteenth century—unable to communicate with the Indians, except by sign language—did not know what to make of the monuments, calling them "idols," which they were not, and only gradually learning their real significance. "Grotesque" was a word they frequently employed in their journals to de-

Denizens of forest, ocean, and spirit world gaze fixedly seaward in an 1878 view. Tall house-front posts represent family crests; freestanding poles with horizontal carved panels are mortuaries—elevated tombs for departed chiefs.

BY GEORGE M. DAWSON, NATIONAL MUSEUM OF CANADA, OTTAWA

scribe the carved memorial and mortuary poles and the house-front posts and paintings.

The village of Koona was not mentioned by name in these early accounts. We know, however, that at the height of its development it had some twenty-seven dwellings and fifty-six carved monuments. In the 1830s, when John Work of the Hudson's Bay Company included it in a list of trading sites, Koona had 471 inhabitants, including many children.

Work called the village "Skee-dans," which was not its true name but a corruption of the name of its chief, Gidansta. The European tongue found Indian names almost impossible to pronounce, and so Gidansta's village of Q'ona (or Koona) became known as Skedans—and it is called that by white men to this day.

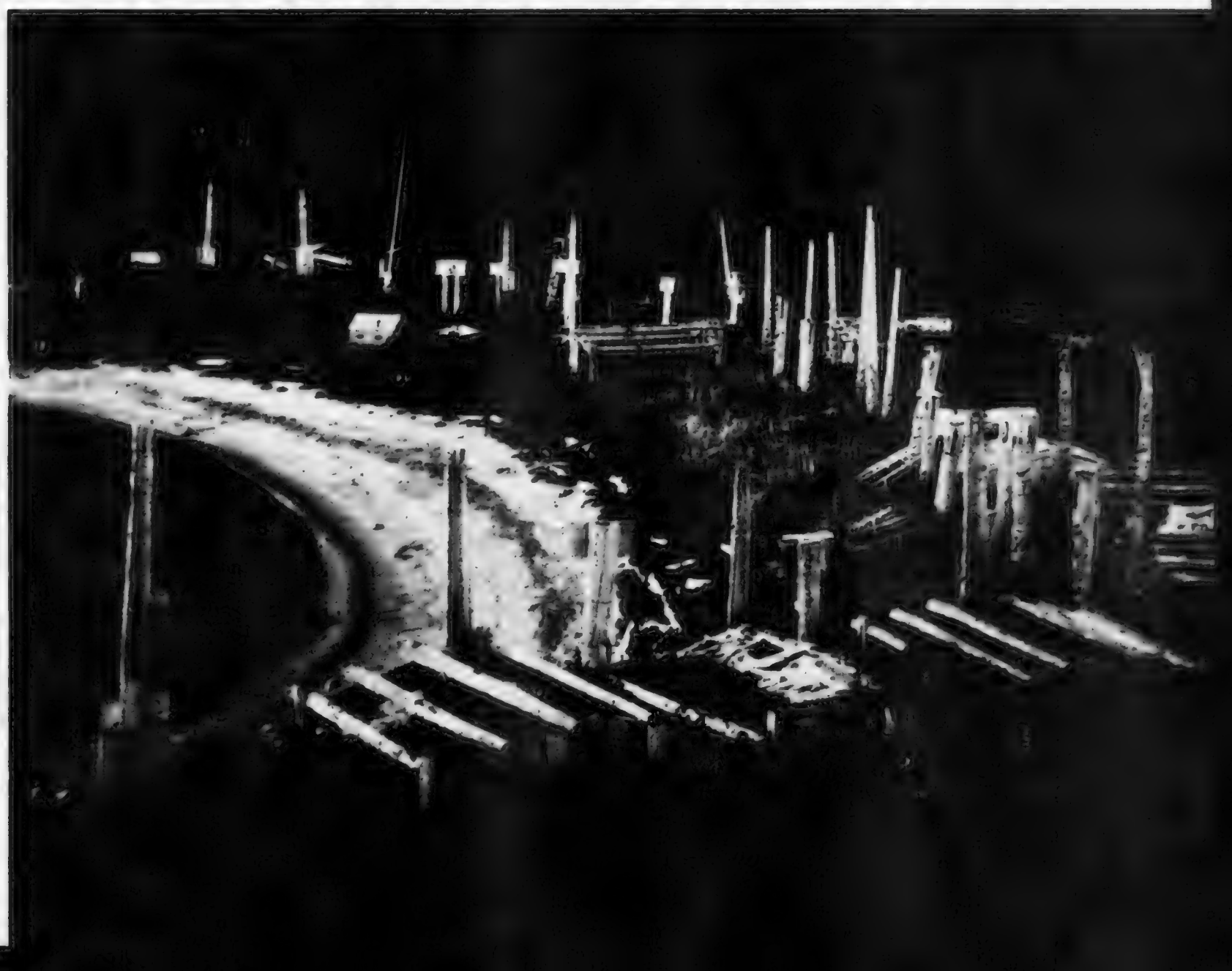
A descendant chief of Skedans was asked many years ago to list the houses and families of old Koona. The list thus preserved is particularly valuable, being the only contemporary written record of the composition of the village. It was given by a man who had lived there, knew the families, and could extend his memory over at least thirty years of its existence.

The houses and families of Koona were a reflection of Haida society as a whole. Both major Haida social groups, or phratries—the Ravens and the Eagles—were represented. The Ravens were said to have descended originally from a mythical ancestress called "Foam Woman." The Eagles were supposed to have sprung from the ancestress Djila Qons or "Great Mountain." Each mythical "mother" had had several daughters who, in turn, had given birth to individual clans, each named after the place where the clan made its permanent home: Those-born-at-Koona, Those-born-at-Qagials, Those-born-at-Rose-Spit, and so forth.

Originally a village in the Queen Charlotte Islands would have been entirely Ravens or entirely Eagles, but wars, competition, and intermarriage eventually resulted in most villages being a mixture of Raven and Eagle families. Friction often existed between neighboring groups of opposite phratries, despite (or perhaps because of) marital ties between them. Some of the Haida settlements were almost perpetually at war with one another. The mixture of Ravens and Eagles at Koona seems to have been fortunate, however, for the history of the village, according to the scant tradition that remains, has been termed extraordinarily peaceful.

In Koona, the Eagle families were clustered together at the western end of the village, bordering the creek. They occupied six of the twenty-seven houses, and possibly a

Sometime during the 1880s Koona was abandoned, its last inhabitants moving to white men's towns. By 1897 the once-majestic longhouses were reduced to skeletons, the monuments engulfed in tall sea-grass and brambles.



BY C. F. NEWCOMBE; PROVINCIAL MUSEUM, VICTORIA

seventh which was not identified by family. Ravens occupied twenty houses, extending eastwards out onto the peninsula. Chief Gidansta himself was a Raven, and his house stood in the center of the row.

We know the names of the houses themselves, and occasionally have an indication of how the house name came to be chosen. Size, construction details, or a carving on the front gave some of the dwellings their names. Pride of ownership seems to have decided the issue in many other instances, and names such as "People Think of This House Even When They Sleep Because the Master Feeds Everyone Who Calls" could have no other source. Contact with the European traders brought metal tools to the Haida as well as blankets and kettles, buttons and beads, hinges for doors—and smallpox. The disease reduced the native population to a fraction of its former numbers and wiped out some villages altogether. Koona did not escape such depredations.

In 1878, George M. Dawson of the Geological Survey of Canada photographed the village. His remarkable photographs (two of which appear on pages 15 and 16) form the first and best photographic record there is of Koona. They clearly show the impressive row of community houses, the "thicket" of totem poles, their magnificent carvings still crisp and distinct, faded but not yet weathered or decayed. Dawson mentions only sixteen houses of the twenty-seven original structures as being occupied. At first glance the photographs seem to indicate that the village was still sound in 1878, if reduced in size, but a closer examination shows houses already becoming derelict; some reduced to skeletons with wallboards gone and timbers mossy.

A decade or so later, the people of Koona reluctantly yielded to the pressures of the white man's civilization and religion, and the village was abandoned. Its last occupants moved to Skidegate, where they began the long struggle to adapt themselves to the new world which had torn apart the fabric of their lives.

AS BEFORE, the autumn rains came to Koona, but now no fires kept out the damp. House roofs leaked and were not repaired. The heavy supporting beams turned from gray to green with moss and ferns, whose roots held moisture until the wood finally became sodden, crumbling with rot and tunneled by wood-boring insects. Conifer seedlings sprouted and bristled from every crevice, growing vigorously though perched fifteen feet from the ground. Their roots

By the mid-twentieth century Koona had almost vanished. The houses lay in ruins, covered with club moss and seedlings. Perhaps a dozen monuments still stood, tilting like dead snags, with scrub brush bristling from their tops.

ALMES NEEDED ONE NEOF JE NOITCITTES

grew and pushed, searching for the earth below, forcing apart the carefully mortised joints until the old wood and the new came crashing to the ground together.

In 1897, Dr. C. F. Newcombe of Victoria, British Columbia, visited Koona and filled his notebook with a rough sketch of the house frames and poles of the village, already disappearing into the undergrowth. He arranged to have one or two of the smaller monuments removed on behalf of museums in Canada and the United States, and he photographed the remaining poles.

Ten years later Emily Carr, a well-known artist and writer from Victoria, visited the abandoned village. She found one or two of the houses intact, having been kept in reasonable repair as a temporary camp for halibut fishermen. All of the other dwellings were in varying stages of collapse, and some of the totem poles were down. In her book *Klee Wyck,* Emily Carr paints a vivid picture in words of the slowly disintegrating monuments:

". . . They were in a long straggling row the entire length of the bay and pointed this way and that, but no matter how drunken their tilt, the Haida poles never lost their dignity. They looked sadder, perhaps, when they bowed forward, and more stern when they tipped back. They were bleached to a pinkish silver colour and cracked by the sun, but nothing could make them mean or poor, because the Indians had put strong medicine into them. . . ."

Decades passed, and more poles fell. The remaining house frames collapsed, and a thick blanket of moss covered their bones. Once in a while a boat entered the placid waters of the bay, and fishermen, geologists, lumbermen, or an occasional tourist prowled among the ruins, taking photographs. In 1954, when a museum salvage expedition arrived in Koona, only eleven of the fifty-six carved monuments known to have once ringed the bay remained erect. An invading army of trees had broken through the ranks in a slow-motion struggle for possession of the shoreline, and the trees had won.

Today there is very little left to see: the stubs of a few poles and one or two carvings, badly decayed. Many of the original monuments are missing; others have been removed to museums; still others are slowly dissolving into the youth and vitality of the new forest. Soon only an archaeologist will be able to find any trace at all of this once complex, creative, and vigorous community.

John *and* **Carolyn Smyly** *live in Victoria, British Columbia, where they have been associated with the Provincial Museum.*

A frog crest of Koona—once part of an Eagle family's proud heritage—crouches in its lair on a fallen monument, stolidly awaiting a return to the damp earth from whence it came.

DAVID AND SUSAN HANCOCK

Fluttering after Villa

Heroics, misadventure, and an occasional touch of the near-ridiculous marked the 1916 Punitive Expedition to Mexico, when the army's fledgling eagles first tested their mettle.

by K. C. Tessendorf

AT COLUMBUS, NEW MEXICO, seventeen Americans dead. At Santa Isabel, Chihuahua, fifteen Americans forced off a Mexican train and executed at trackside. The guerilla forces of Pancho Villa perpetrated both atrocities within the first three months of 1916, and the central Mexican government of Venustiano Carranza had failed to keep its promise to apprehend the guilty. So President Woodrow Wilson, responding to public fury in the United States, established the 15,000-man U.S. Army Punitive Expedition under Brig. Gen. John J. Pershing. Its purpose was to enter Mexico and "assist" the Carranza government in capturing and punishing the charismatic and increasingly powerful rebel general.

In mid-March of 1916, Pershing dispatched two separate columns of cavalry and foot soldiers across the New Mexico border and into Mexico, hoping that they would somehow find and squeeze Villa and his guerrilla force between them. But the countryside was a high, rugged wasteland, and its scattered inhabitants were unfriendly to his purpose. Furthermore, he was instructed to avoid the towns so as to lower the risk of ugly incidents.

Though Pershing appeared fated to grope in the dark to satisfy patriotic fervor back home, he believed he had going for him two effective new weapons—both thus far untried in combat conditions. One was the motor truck, which should efficiently keep pace with and supply the long-reaching mobility of his units. The other, which would be his far-seeing eye and swift messenger, was the airplane.

Army captain Benjamin D. Foulois was an officer who read with extreme interest and trepidation the news and dispatches concerning the gathering of the Punitive Expedition. He was certain that his unit—the 1st Aero Squadron—would be called into action.

Eagles from north of the border—Army Lts. Edgar S. Gorrell and Herbert A. Dargue—await flying orders beside their Curtis biplane at Casas Grandes, Mexico, during U.S. Gen. John J. Pershing's pursuit of Pancho Villa in 1916.

NATIONAL ARCHIVES

CULVER PICTURES

A master at hit-and-run tactics, and operating in his home territory, Mexican firebrand Pancho Villa (above) and his horse-and-wagon irregulars proved frustratingly adept at evading Pershing's much larger, mechanized command.

Captain Foulois commanded what then was in effect the total operative American Air Force—eight unarmed, unwieldy aircraft. The airplanes' technical deficiencies were somewhat balanced by the eight young, gung-ho officers who piloted them. These officers were not, however, so gung-ho as to court foolish aerial death unprotestingly. There had been near-insubordination following some crashes of America's top military aircraft, the Curtiss JN-2.

The earliest service model of the "Jenny" line was inherently unsafe—too heavy for its ninety-horsepower engine to handle. Someone had computed that at sea level only four horsepower was reserved for climbing potential . . . and the Mexican Chihuahuan desert averaged 5,500 feet above sea level. Moreover, the underpowered craft needed optimum conditions to maintain level flight and had a dangerous tendency to fall or slip off to either side.

How could these things be, in an era when aerial strength and usage in combat was well advanced abroad; when daily losses of aircraft in the European war then raging exceeded the total strength of the tactical American Air Force? The United States ranked *fourteenth* in air power; indeed it was only because of European war priority on aircraft manufacture that Mexico had not obtained an air force larger than that of the United States. Even Pancho Villa tried to get one —but after a demonstration flight crashed on landing, the Villista cadets stampeded for the hills.

The genesis of U.S. unpreparedness lay in lagging congressional appropriations. The nation which had invented the airplane and resourcefully set world records with it, which had pioneered in military aeronautics by developing a bombsight and bomb-dropping device in 1911, which had experimented successfully with the airplane as a flying gun platform, as well as with aerial photography and two-way radio telegraphy—this nation had appropriated a total of $453,000 for aircraft development between 1908 and 1913. Germany, by contrast, had spent $28 million on military aviation.

On March 12, orders came in for the 1st Aero Squadron, then at Fort Sam Houston near San Antonio, Texas, to proceed *by rail* to Columbus, New Mexico. Captain Foulois was in agreement as to the efficiency of that. He recalled it had taken five operational days to fly down from their last assignment at Fort Sill, Oklahoma, and the distance to Columbus was twice as far—better take the train.

Crated up and efficiently delivered by the Southern Pacific Railroad on March 15, the squadron was welcomed at Columbus as a rare mechanized army unit. Its dozen trucks and portable machine shop were eagerly appropriated by the Quartermaster Corps for its general activities of support and supply.

The first aerial reconnaisance flight over Mexico took place on March 16. Captains Foulois and T. F. Dodd, in their Jenny two-seater, saw nothing of military interest during their thirty-mile penetration. A virtue was made of these negative reports (and there would be many) because they enlightened General Pershing as to where Pancho Villa wasn't.

The American tactical command had already penetrated far into the Chihuahua wastes, and on the morning of March 19 the squadron was ordered to fly immediately to Casas Grandes, a Mexican town 125 miles due south. It was late the same afternoon before departure preparations were complete. Prudence dictated a dawn takeoff. But Captain Foulois, an army regular for seventeen years, respected the "immediate" in his orders.

Off they flew into the darkening blue—eight fragile aircraft, the sole cream-puff punch of the Army Signal Corps's air arm. It was beautiful, it was brave, it flirted with disaster. Lt. Edgar S. Gorrell was present for that dubious duty and he has written:

We took off at 5:15 P.M. *. . . With our cruising speed . . . a landing in the darkness which fell before seven o'clock was a certainty. In the whole corps only one man had ever flown at night and he had made but one night flight.*

We had no maps which could be considered accurate. We had no idea where Casas Grandes was. We had no reliable compasses and such as they were, each airplane was equipped with a different type. We had no lights on our planes and knew when the sun went down we could not see any instrument, regardless of whether it was good, bad, or indifferent.

Telegraphic information that the landing field would be lit by fires reached us before we took off. Our orders were to follow the airplane ahead of us, so if one got lost then all would get lost.

Each man wondered what a night flight was like . . . what the country beyond Columbus held in store for him. But we had been told that airplanes were urgently needed and we were eager to respond to the call as best we could.

AS THE DARING OCTET rose heavily into the thin atmosphere they immediately became a septet. Engine trouble forced the return of Lt. W. G. Kilner, who thereupon was fortunate enough to receive a slightly better-tuned engine in exchange for his old one. Meanwhile the formation straggled southward, opening out somewhat as it became dangerous to remain bunched together in the deepening dusk.

When the landscape had become sheathed in purple shadow, Captain Foulois thought it wise to land beside the village of La Ascencion for the night. Three other pilots, noting his intent, followed him down. A few miles beyond, Lt. J. E. Carberry, who had lost contact with the others, saw the lights of the town of Janos and gratefully landed. Now only two remained aloft.

Lieutenant Gorrell followed Lt. R. H. Willis, who followed his wits. Full darkness separated them. Both noted a fire-lit area ahead and nearly collided in its vicinity. Lieutenant Willis then abandoned this possibility and flew toward the friendly after-glow of the sun until, gasless, he landed blindly but safely on a desert plateau. Meanwhile Lieutenant Gorrell reconnoitered the supposed safe haven:

When I got to the field it appeared most unusual. It was down a narrow mountain valley and the fires were in all directions on both sides of the valley. My impression was that a large number of trucks had been parked with their headlights shining down both hillsides. . . . Finally I realized that what I had flown to was a forest fire and not the landing field.

I pulled up the nose of my ship and with difficulty turned around in the narrow canyon, finally climbing higher than the walls of the mountain. I then circled around the country, looking for signs of our troops or for any fires in any other direction that the troops might have lit.

I saw only four things: One, the mountains below me, two, the full moon, three, the North Star, and four, the darkness—if one can see darkness.

Spotting the ribbon trace of a stream by moonlight just as his motor sputtered into extinction, the desperate pilot let down gradually by steps until he "leveled off tangent to the ground" in yet another miraculous blind landing.

The further adventures of Lieutenant Gorrell as he suffered desert hardship and bargained his way to safety amid suspicious locals (by the carrots of Yankee dollars and the stick of his .45 pistol) are a thrilling chapter in escape literature. Lieutenant Willis saw no one and painfully hiked forty miles. The 1st Aero Squadron pilots did a lot of walking in the Mexican campaign.

At dawn of March 20, Lieutenant Kilner took off from Columbus and two hours later found himself the first arrival at Casas Grandes. Lieutenant Carberry arrived next, and then the La Ascencion quartet. Captain Foulois grimly noted the site of the lighted airfield the army had readied for their night arrival. It was a hummocky marsh that a truck could not have traversed, with tall cottonwoods adjoining. The Villistas could scarcely have chosen better for their purpose. Lady Luck surely flew with the 1st Aero Squadron that first night.

Hoping that Gorrell and Willis would also somehow turn up, Captain Foulois reported in to General Pershing's headquarters and was immediately assigned a reconnaissance flight to locate an American cavalry unit in the vicinity of Cumbre Pass.

The Dawn Patrol takes off—a Curtis "Jenny," blasting dust into the faces of assisting doughboys, taxis onto a Chihuahuan airstrip. Perverse weather, high mountains, and underpowered aircraft hampered reconnaissance missions.

BOTH PAGES NATIONAL ARCHIVES

Unfortunately, the officers could not follow orders without penetrating the Sierra Madre Range, and captains Dodd and Foulois, riding tandem, found their frail biplane buffeted by turbulence and unable to climb above even the foothills of the Sierra Madre. Sadly they turned about, aborting their first combat mission.

Lieutenant Bowen then volunteered to attempt the same task alone, thereby relieving the overworked engine of perhaps 180 pounds. Taking off into a gusty headwind, the Jenny tipped sideways at an altitude of fifty feet and slid into the ground. The officer walked away with a broken nose; but scratched one plane as a total loss.

After footsore Lieutenant Willis finally checked in, a motorized squad was sent out with him to retrieve his aircraft. But unfriendly persons had hacked it into very small pieces. When, a week later, Lieutenant Gorrell was able to return his ragged aerial mount to the fold, the squadron was down to six barely serviceable airplanes.

It soon became evident the Jenny would not be General Pershing's far-seeing eye—not if mountains intervened or the weather was blustery. But the 1st Aero Squadron did function tolerably as his swift messenger. Staff orders and inquiries were ferried to and fro among the isolated cavalry spearheads—when they chanced to be in accessible valleys—and a military airmail connection was established with the States.

Airborne dispatches were of intermittent aid to Col. George A. Dodd's 7th Cavalry in a probe which surprised and savaged the main Villista band at Guerrero, some four hundred miles south of the border, on March 28. But the most sought-after prize, Pancho Villa, had been severely wounded in the attack which overran the Guerrero Carranzista garrison a day or two before. He had retired to a secret mountain hideaway and was not heard from again until after the Americans withdrew from Mexico.

In the stormy, high-altitude winter routine, pilots suffered physically and their frail craft were buffeted unmercifully. Here and there a landing or take-off miscued drastically, and another aircraft was written off. On one occasion, a torrential downpour left Captain Foulois with a foot of water in his cockpit and a stalled engine; fortunately the forced landing that followed was uneventful, and a wagon happened to be available for the customary overland trip back to camp.

On April 19, Lieutenants Willis and Dargue, while aloft on an aerial photo mission, incurred another engine failure and crashed on a mountainside. Dargue was unhurt, but Willis was badly scraped and bruised in his second crash within a month. They limped off on foot. It was a sixty-mile hike this time. Though patched up for duty, Lieutenant Willis continued to ail, and a month later, in the States, doctors discovered he retained a broken ankle.

"Well, I guess that's why it always felt better when I sat down than when I stood up," was the rugged flyer's comment.

The Dawn Patrol returns—Capt. Benjamin Foulois and Lt. J. E. Carberry arrive back at their airfield in the luxury of a horse-drawn wagon after a forced landing; more often the aviators had to hoof it home on foot.

CAPTAIN FOULOIS wrote pleading letters, and General Pershing lent his support in urgent recommendations to the War Department, asking for sturdier replacement aircraft and a variety of auxiliary supplies that field experience deemed necessary. To no one's particular surprise, they were not forthcoming. They hadn't been manufactured—or in some cases invented—yet.

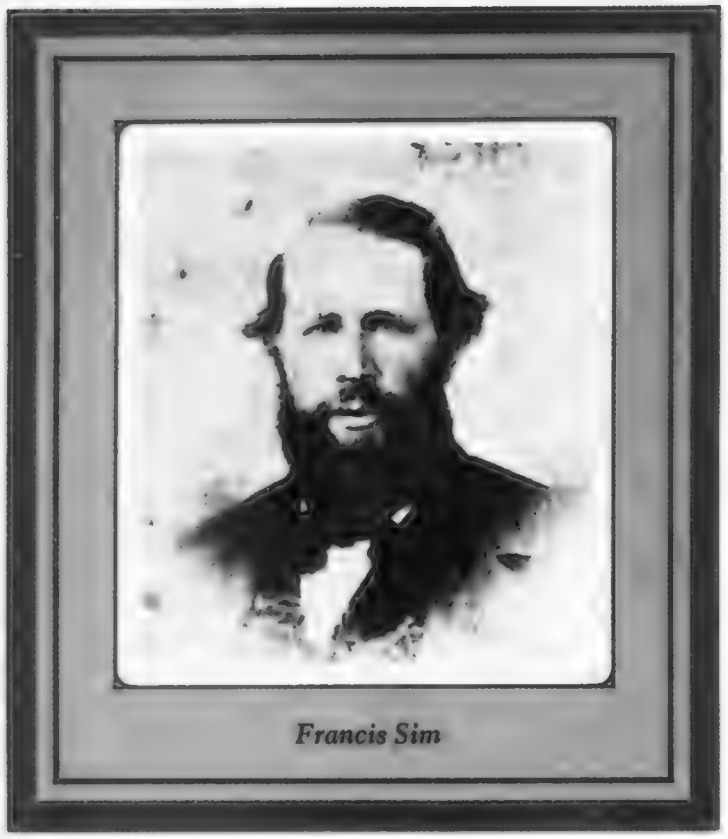
It should not be supposed that the human air force suffered without audible complaints. An enterprising newsman sent north a purple exposé, and amid the resulting clamor, Washington brass ordered a punitive investigation of the leaks. This was allowed to spend itself harmlessly; the important thing was that America's aerial deficiency was now public knowledge.

A final colorful adventure engaged the fading 1st Aero Squadron. General Pershing had urgent need to call on the American consul at the provincial capital of Chihuahua City for assistance in alleviating a supply bottleneck. But the town was a hotbed of anti-American sentiment, and an international incident was probable if a U.S. detachment were to attempt approaching it. General Pershing looked to his airmen for a quick, discreet penetration.

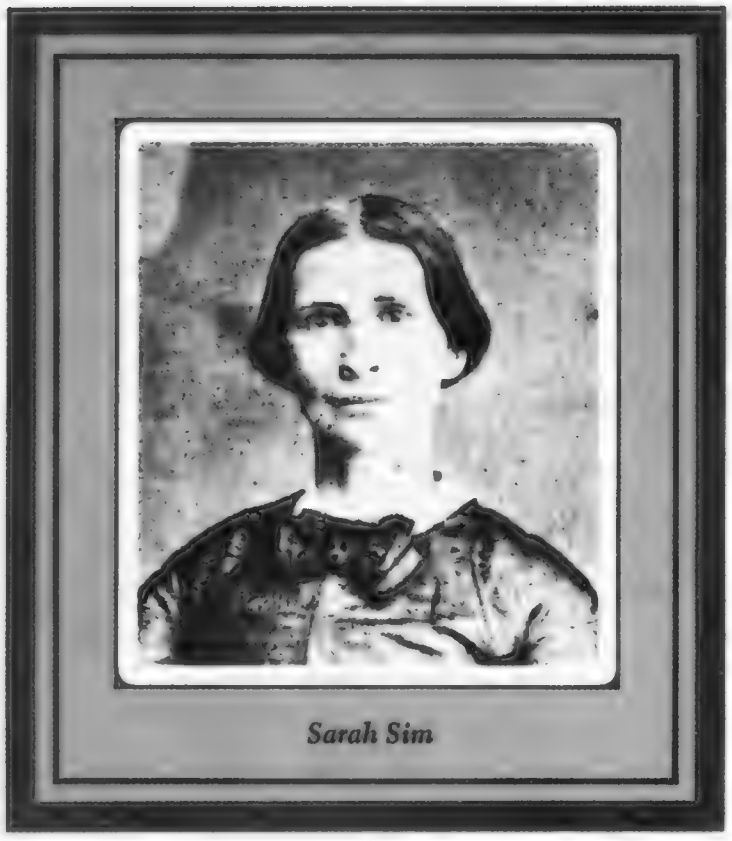
Two planes set out with duplicate dispatches, one to land on either side of the city. Unfortunately, they failed to approach with sufficient discretion, and the fearful populace had adequate notice of their landings. A nervous crowd awaited each messenger plane.

Carberry and Dodd made up one team. They landed to the north of town and matter-of-factly faced a noncommittal throng. Captain Dodd hired a carriage and proceeded to visit the American consul.

Continued on page 62



Francis Sim



Sarah Sim

Problems in the Land of Opportunity

The Nebraska Territory was full of promise—but sometimes the harsh circumstances of life there demanded more than a person could bear.

by Elizabeth N. Shor

MANY OF THE NEW ENGLAND FARMERS who resettled in the Nebraska and Kansas territories during the 1850s were swayed by what they considered to be the need to save those areas from becoming slave states. But most were also influenced by the hope of getting better land and opportunities than they felt they had back home. To the raw new territories the farmers carried their hopes and dreams, their resources, and their families. Sometimes the harsh new circumstances were almost more than an uprooted family could cope with.

Here is one example. The story is told through letters that a husband and wife wrote to the woman's family in Connecticut. Of Francis Sim, the husband, and of his background, we know only that he was born in England. History has not recorded why he decided to move west from his adopted New England. He and his family did move in 1856, two years after the Kansas–Nebraska Act established the right of those territories to determine the slavery question for themselves.

The wife, Sarah, was the eldest of twelve children (nine of them girls), all of whom lived to adulthood. Her father was a farmer near Middleton, Connecticut, with enough productive land to support his family, but with little cash to spare. The household was a close-knit one, and Sarah was accustomed to having the many immediate members of her family, and numerous cousins and friends, around her. When she moved west with her husband, she was thirty-two years old and had three small children: four-year-old Helen, two-year-old Willis, and "baby" Phillip. The youngest was almost totally blind, apparently since birth.

The family's destination was Otoe County in the southeastern corner of the Nebraska Territory. On September 15, 1856, they reached St. Louis, but "owing to the lowness of the [Missouri] river" it took another eleven days, instead of the usual five or six, to reach Bennett's Ferry in Otoe County, about eight miles from Nebraska City. The journey west for the family and their freight cost over $250, a large portion of their cash savings.

Writing to his parents-in-law about a month later, Francis Sim noted that "it was a very great undertaking with three small children, to come as far and to be so long on our journey, but on the whole we got along well, which is a

matter of thankfulness." "On the whole" glossed over the fact that two of the children had whooping cough on the journey.

About their new location Francis wrote:

This place [Bennett's Ferry] is not improved and laid out so much as I expected to find it. But the location is a very good one for a town; it is on a very good point. . . . Willis and Phillip the babe have the cough very bad. Sarah feels a little homesick but hopes for the better. I have not made any claim yet; all are taken up within four or five miles of this place. . . . This is a beautiful country but quite new, everything looking very rough.

Sarah wrote home optimistically in early October:

As I have just got the children asleep quietly I will try to write you a few lines. I am sitting in our little cabin which serves for bedroom, parlor and kitchen in ten feet by ten feet, so you may think I have but little room to turn around in. However I manage to get along pretty well. I have a stove, a table, six chairs, a bed, a rocking chair, a little chair, and a cottonwood cradle.

We bought a [160 acre] claim about 2½ or 3 miles from the city (if so I may call it) with some improvements on it, some corn and fence, and a yoke of oxen. Our house is situated near a grove and a few rods from a brook so that we have plenty of wood and water. The water here is all hard and bad to wash with. The weather is very dry, and the country presents a very dry appearance. We have neighbors not far from us. They are mostly eastern people that are settled around us.

The land here is rich and fertile. The soil is as black as a coal pit bottom with no rocks or stones. The wind blows very hard here sometimes, and it seems as if it would blow our little house away. I can't tell how I shall like it yet. There are a great many inconveniences to be put up with for some time to come, but the country is filling up fast and a few years will make a great deal of difference in its appearance. I feel rather lonely and homesick sometimes when I think how far away from home and friends I am. . . .

I bore the journey very well. Helen got along very well; she is a good traveler. Willis and the baby were very troublesome. They coughed very hard and Willis had the diarrhea a great deal. . . . On the whole we got along as well as I expected to.

We have not got our freight yet, and I feel somewhat anxious about it. It is now going on six weeks since we left Middletown. We want our things very much. We borrowed a few things of the neighbors to keep house with.

Their belongings did reach them soon after. Sarah began looking ahead:

I should [think] that in the spring the prairies would look very beautiful. Strawberries grow in abundance; plums and gooseberries grow wild here, as do hops. We have yet some apple trees to set out in the spring, and I hope that in a few years we shall have a good place—but I don't think it will ever seem as much like home as Middletown. I should like to have some of our family settle near us very much. Sometimes I feel rather lonely but I suppose I shall get over that after a while.

The country is settling up very fast. People come from all quarters. We have neighbors not very far from us. There is no school nor church as yet in this place. There is preaching once in three or four weeks at private houses.

We live where the Indians did last winter. There are some of them camped about these parts now I believe. I have not seen any yet. I hope they won't trouble me. . . .

SARAH'S TROUBLES were to be of quite another kind: illness and heartbreak. On February 8, 1857, she sadly wrote her family:

We received a letter from you . . . dated January 20th. It seems that you had not then received intelligence of dear little Willie's death, but I suppose that you have received a letter from us saying that he was very sick, and you feared that he was not living when you wrote. Alas it is too true. He is gone from whence no traveler returns and O how we miss him. There seems a great void that can not be filled. It is a dreadful trial to us. It sometimes almost breaks our spirits down.

O it would have been a great satisfaction to us if you or any of our friends could have been with us but the circumstances in which we were placed made it very aggravating to us. It seems to me that I can never get over it in my life. Trial and affliction seem to be our lot wherever we go and whatever we do. Sometimes I feel almost discouraged but then we must trust to Providence believing that He knows what is best, and trust that infinite wisdom will eventually work things for our good. It is a world of trial and affliction and I feel as if I had a large share. . . .

We are getting along about as usual. Mr. Sim [as Sarah called her husband in most letters] is not very well now. He has a hard cold, and it seems to have settled all over him. He is not able to sit up much, but I think he is a little better. He has been sick a good deal since we have been here. . . .

The weather is very cold here; it is the hardest winter ever known in this part of the country, so say the old inhabitants. It has been a dreary winter to us but spring will come soon and things will look more cheerful. Helen . . . misses Willis very much. She has no children to play with but the baby. . . . Phillie is cutting teeth and is very worrisome. He is not very well; he is troubled with the diarrhea a good deal. My own health is very good.

Francis' illness lingered. The doctor called it "dyspepsia," but to Sarah her husband appeared "to be strangely sick." She blamed it on "exposure to the cold and to anxiety of mind and partly to the climate. . . . He took the death of Willis very hard."

The harassed wife struggled alone with family and farm chores through what she called a "dreadful," a "gloomy," and a "long dreary" winter. Her spirits were flagging, even

PAINTINGS ON BOTH PAGES BY HARVEY DUNN, COLLECTION OF SOUTH DAKOTA MEMORIAL ART CENTER, BROOKINGS

No artist has better portrayed prairie life than Harvey Dunn; his "Homesteader's Wife," though probably intended to depict the life of a Dakota woman, could equally apply to Sarah Sim in Nebraska in 1856.

while she realized that the family was much better prepared for the winter than many of their neighbors:

We have three cows and a yoke of oxen, a horse, a sow and eleven pigs, five shoats, and some hens—and sometimes I have them all to feed. I have enough to keep me busy.

In another letter she commented:

We have had it cold enough here in all conscience. If all the winters are to be like this I shall be for emigrating south to milder climes. . . . We took care to provide for the winter as well as we could. We have some provisions on hand; enough to last until navigation opens. We can get some game. There are plenty of prairie chickens here; some times we get them. Rabbits and quail are plenty, and prairie wolves, and there are some deer but they are very wild. . . .

Dear Father, when you write do write longer letters to cheer us in our affliction. We feel very cast down at times.

As spring approached, Francis' health slowly improved, but Sarah noted that he worried about having enough strength to do his next season's plowing and planting:

It makes it very bad for us for him to be sick so long, but we have to take things as they come, hoping it will be better with us by and by. If Mr. Sim has his health we think to plant about twelve acres of corn and one acre of potatoes, some turnips, and plenty of pumpkins. They grow very large; and also watermelons grow to a great size. Strawberries grow in abundance and also gooseberries and plums—but if we do not have our health we can't get along much. . . .

My health is very good at present and also the children's. Helen has learned to read a little. She can sew a little. She is a wild little creature and wants to be out of doors all the time. I hope we shall have a school this summer. Phillie walks a little. He puts both hands before him. He gets along better than I expected he would. It is a great trial to have a blind child; it seems as if it would break my heart.

SARAH'S GOOD HEALTH, after the strain of winter, was about to take a sudden turn. In her letters the difficulties appeared to be related to what she called a "felon" on the forefinger of her right hand, a painful sore that had to be "opened" by the doctor. Before long the infection worsened, and the finger had to be amputated at the first joint. Naturally, Sarah now found all household tasks much more difficult. Perhaps as a reaction to the severe winter and its complications, she went into an intense melancholia. In a handwriting quite unlike her usual neat one (probably because of her finger), she wrote on May 2:

I have worried and sorrowed over the past a great deal and my mind is in a rather gloomy state but I hope that I shall get over it and enjoy life again. I hope there are joys yet in life for me. Pray for me, dear Father and Mother, that I may overcome my present fear.

Three days later Francis felt obliged to write to his wife's parents more explicitly:

A prairie burial—"I am the Resurrection and the Life." To Sarah's hardships in starting a new home in Nebraska was added the heartbreak of separation: her two-year-old son died soon after arrival.

It is with feelings of great sorrow that I write you these few lines this evening. I cannot keep it back from you any longer. I must let you know that my poor dear wife for a long time past has been very low-spirited, has grieved herself almost to death for the loss of our dear little Willis, and at this time she is just as crazy as most any one that I ever saw in my life. She will tear her clothes, bite her own person, and what is worse than all, make efforts at times to destroy herself and the children. This is one of the greatest trials that I ever felt in my life. I have to be with her most of the time and during the time that I am from the house someone else has to be with her. . . .

What can be done I cannot tell. She is afraid all the time that she must be lost, and that God has no mercy for her. I let her go over to my neighbor, and she slept there two nights, and the second morning she ran off in the woods with a rope with the intent to hang herself. We soon made our neighbors acquainted with it, and men and women [searched], some on horses and others on foot, and we found her alive but [she] had lost the rope. Went off without anything on her head and without a shawl; tore off the sleeves of her dress, and what to do by her I do not know. . . . I have been obliged to tie her hand and foot on the bed. . . .

Some days she seems very comfortable, but is in a despairing state all the time thinking she must be lost. I am afraid at times that I shall find the children and my poor dear wife in a mangled condition. You cannot think for one moment what my feelings are at those times. It was a trial enough I thought when I lost my dear little boy but it cannot begin with this affliction. I can but badly write to you, especially on such a subject as this. . . . Write me often. . . .

Two months later the situation was still no better. Francis wrote on July 5:

Sarah's health is about the same as when I wrote you last. There must be something done for her shortly. If not I think there is no possibility of her living in this state of mind. She fails all the time, and I cannot tell what to do by her. She is in one continual trouble walking the house, and at times in a wild frantic way, tearing her clothes and smashing up the things in the house. A few days since she bit little Phillie on the shoulder and near taking a piece. The marks of her teeth are there now and I expect will be for some time. . . .

My crops are looking good [even though] the corn crop has failed generally through the country. I do not think that anyone in the Territory has so good a piece of corn as what I have. Everyone that sees it says that it is the best corn that they have seen for this season. . . . If Sarah's health was good we might take some comfort this summer, but I am sorry to say my life is a miserable one. You must think that I have plenty to do at this time. I have no help to help me. I am to work from sunrise to sunset.

In August, Francis' father came (from somewhere unspecified in the letters) to live with the beleaguered family. He proved to be a great help to the harassed husband. One of

PAINTINGS ON BOTH PAGES BY HARVEY DUNN, COLLECTION OF SOUTH DAKOTA MEMORIAL ART CENTER, BROOKINGS

"After the Blizzard." Grieving for her lost son and facing the dual strains of a hard winter and a sick husband, Sarah Sim finally broke down and drifted into a severe, seemingly hopeless, state of melancholia.

Sarah's brothers, who lived in Cincinnati, stopped by briefly and, though unable to lend assistance himself, suggested to Francis that Sarah should be taken home to her parents. Francis wrote despairingly:

He thinks if her health does not improve by the first of October, my better way will be to take her east, but this will tend with great expense and a loss of time to me in a time to secure my crop, and on the other hand I do not have the funds to do it. I would be willing to do this and everything that I could providing I had the means to do so.

I must be plain with you that if there is not something done for Sarah she cannot live long in this way. . . . It makes my heart bleed when I write, and now Helen is sick and has been for the last three weeks. . . . When you write you can let me know what I am best to do with Sarah and the children. They are ragged and dirty. There is no woman that would like to come here and wash or do any house work. . . ."

The frantic husband was still trying to cope with his problem as another winter approached. On September 28 he wrote:

It was but this last week that [Sarah] struck Father behind the head and tore up her bonnet and apron. You know she at one time was very neat and clean but now she is all the other way. . . . She has broken three windows and a great many things in the house. One morning she took a tumbler and bit a piece out of it the shape of her teeth. . . . Had I money Sarah should not suffer for the want of means but as I am situated I cannot do anything for her more than I have done.

Francis did not yet realize that the worst of the crisis was past. In that same letter Sarah wrote to her parents for the first time in many months:

We received your letter. . . . Francis wants that I should try to write a few lines in answer to it but my mind is in such a dreadful state that I am hardly able to write anything. I can but badly do my work and take care of my family. I scarcely know what to do with myself. I wish I was as I used to be and that I could do as I used to but I cannot and I feel very bad about it. If I could once more be restored to my former state of mind and be able to take care of my family I would be very thankful to God. . . .

I wish that I might get better but I sometimes quite despair. Francis will tell you a dreadful story in his letter but I can't help it. He thinks I might do a great deal better. There is none that feels so bad about it as I do. I feel as if I was the worst in the world. . . . I would do anything to get better.

THE LETTERS began to take a brighter turn. Sarah was obviously already getting better. Over the next few months she steadily regained her more cheerful spirits and resumed her household duties, though she noted in January of her second winter that "I feel as if I was growing old. I brought but few gray hairs to Nebraska but I have a good many now." And by then she could say matter-of-factly:

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"The Prairie Is My Garden": with the passage of time Sarah's health and love of life returned. Later she would bury four more children but, like many a pioneer mother, she learned to accept life's tragedies as well as its blessings.

"My work got so much behind through the summer and fall that I have to work very busy this winter to catch it up."

The winter of 1857–58 was a much milder one than that of the preceding year. Francis' health was excellent, and his father was a great help with the incessant tasks. Little Helen helped diligently with milking the cows and other chores. Active and mischievous Phillip, though a constant worry to his parents because of his blindness, fetched the firewood and found his way about better than they had feared he would.

The territory continued to fill up rapidly, Francis reported, and mostly with "free state men." The family rejoiced in the building of a school half a mile from the homestead and in the construction of two brick churches in Nebraska City. Francis worked steadily to fence his 160 acres of land, and during his second winter he salted 1,560 pounds of the "very best pork" for sale. He also built a sixteen-foot addition to the house and a kitchen and buttery for the convenience of Sarah. She caught up with her neglected tasks, and in the spring she happily planted flower seeds sent from home. Before long she was also sewing for the next addition to the family—a "pretty little girl," born in February 1859, who they named Sarah Jane.

By April of their second year in Nebraska, Francis was once again able to view the future with optimism in letters to his in-laws:

> We have had a most delightful winter and the spring came in much more so. . . . You must not trouble about us. We think we shall make a good living. This is a good country for a farmer. . . . Let your children come out here. Do not keep them in such a killing country as Connecticut to make a living.

Francis Sim's farm continued to prosper over the next decade. He was able to grow all the crops needed for his family and livestock, and the family secured some cash through sales of pork and butter. Francis also found time to serve the territorial government in its House of Representatives in Omaha.

During the next several years, the Sims had five more children, all boys. But as before, blessings were mixed with tragedy. In October 1863, much-loved Helen and her little sister Mary Jane both died of diphtheria, and the following month their infant brother died. Francis' father succumbed four weeks later. In May of 1864, young Francis, but three years of age, died of mumps and "lung fever."

Within a decade after her arrival in Nebraska, Sarah Sim had buried five of her nine children. But this courageous woman had learned to endure such tragedies, and never again did she yield to the severe melancholia of that first terrible year.

Elizabeth N. Shor *is a writer at the Scripps Institution of Oceanography in La Jolla, California, and is author of two books on the early history of American paleontology. Her browsing through a collection of letters in her husband's family turned up the material for the above article.*

Conversations with John Muir

An experiment in the bridging of time

by T.H. Watkins, with photographs by Dewitt Jones

As will become apparent to the reader, the following dialogues with John Muir (1838–1914) never actually took place. Some will call them inventions, fantasies. I would prefer to think of them as an experiment in the bridging of time, an attempt to emphasize the lasting importance of one man's lifetime of thought and experience. Many of the words I have given to Muir are in fact his own, taken from his published and unpublished work and his recorded conversations. Those that are not are, I believe, consistent with his philosophy and personality as I have come to know them. My own responses are, of course, my own, but they are not without the visible influence of Muir's ideas. My stance—if we can call it that—in these dialogues is that of a student to a teacher, and in placing myself in such a position, it is my hope that what he had to give to the future will be given an enhanced clarity.

T. H. W.

The house sits like a great brown mushroom on a small knoll at the western end of California's Alhambra Valley. It is an elegant Victorian place, topped with the curiosity of a bell tower that commands a view of the whole valley. Below and to the right of the house as you face east is a freeway snaking past the little city of Martinez. The freeway is Highway 4, which is a link to the Eastshore Freeway, which is the link to the Nimitz Freeway, the MacArthur Freeway, the San Francisco–Oakland Bay Bridge, and all the other whips of concrete that make up the tangle of the Bay Area's transportation network. There is not much land left around the house now. It is surrounded by housing developments and service stations, body shops and supermarkets. It is an island carved out of the past; they call it the John Muir National Historic Site. It is administered by the National Park Service and the public is welcomed.

It has been a long, wet winter, but spring is finally here. The oak-studded hills around and behind the house are a bright, pool-table green. Scotch broom, wild mustard, mimosa, and lilac blooms illuminate the hills and the evening breeze carries a hint of warmth and the smell of salt—and of exhaust

fumes. You are standing on the porch of the house. It is nearly dusk, and the last tourist has long since left. You are alone, except for the old man next to you. He leans with his hands against the railing, his nose and straggling white beard thrusting into the breeze, his bright blue eyes peering between the tall Canary Island palms that flank the entrance to the house. You wonder what he is thinking. You ask him.

After a moment he turns to you with a soft bark of a laugh. "Work."

"Work?"

"Aye—work. I was remembering that I worked here on this land every bit as hard as ever I did back in Wisconsin as a boy, back on the old farms. You canna see it now, but perhaps you can imagine it." He moves his arm in a wide arc. "Peach trees, cherry trees, olives, pomegranates, tamarisks, quince, figs, oranges, pecans, pears, plums, lemons, and grapes. Some were planted by Father Strentzel—a dear, guid mon—but most by myself. For ten years I worked here like a dray horse. All in a good cause, lad. Money. It meant freedom. It seemed worth it at the time. I look at it now and wonder."

"You mean now that it's all gone?"

"Aye, all but this patch of ground, this sorry remnant. A national monument, they call it." He puckers a grin at you, puts a finger against his nose, and falls into the heaviest Scotch. "I dinna ken, noo, if 'tis a' that mooch an honor. 'Tis a bit as if I hae been stuffed and propped up in a corner for the gawkin' o' the populace."

When you enter the house you find it dimly lighted. It is a good house, a grand house, the kind of house that for all its size is redolent of those who lived in it and loved it—a place that adapted itself to all the joys and sorrows, sweats and shouts of life. People lived *in this house, they did not reside in it. To your left as you enter is the family parlor, with a fireplace large enough for a Yule log, and to your right the formal parlor, with its patterned red velvet wallpaper. Down the wide entrance hall is the dining room on the left and the library on the right, paneled in mellow heart of redwood. Beyond these two is the kitchen.*

The old man nods approval as you move through the rooms. "I have to admit," he says, "they've done a bonnie job of work here. The furniture isn't the same, of course, but close, very close. Aye, a guid job."

You climb the stairs to the second floor. On the left side of the hall is a line of bedrooms leading back to a large bath. On the other side is the large master bedroom, and in front of that, its tall windows looking east down the valley, is the study. The old man bursts into laughter as you enter this, throwing his head back in delight at the scene. A desk sits flush against the windows. It is strewn with books and papers, pencils and pens. A wastebasket to the left is piled with crumpled, written-upon sheets of paper and the floor about the desk is littered with more. "My scribble den!" the old man exclaims. "They've done it to the life, the very life!"

He steps over the rope barrier and beckons you to follow. "Mind you don't step on the papers. We must leave this as we find it." He sits in the desk chair; you choose another and face him, listening. He is still smiling. "Aye, my work habits were the despair of my daughter Helen. She typed most of my scribbles for nearly two years, you know, but when I was in the full heat of composition I would simply toss the pages behind me, guid and bad, with no thought to which was what. She finally blathered at me long enough to get me to tie the guid

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This article is adapted from a series of "dialogues" in the Muir biography John Muir's America *by Dewitt Jones and T. H. Watkins, to be released in April by the American West Publishing Company.*

pages with red ribbon into a package so that she would know what to type."

One hand resting on the desk, he faces you, the smile fading like the last of twilight. "A' reet, noo," he says gently, "what is it you wanted to talk about?"

"Machines," you reply. "I want to know about man and machines."

He nods. "Aye, and ye've come to the reet mon. They once were nearly my life, you know. From a lad, I was forever whittling and planning, fitting the wheels together. There was great joy in it, and satisfaction—aye, and a kind of compulsion. Great God! there were times when I was haunted *with inventions that tortured me sleeping or waking until I could give them visible form, something that could be seen or touched, something that worked. My mind and heart both were given to them."*

"But you stopped. Why?"

"For a long span," he says slowly, "I believed I had given them up because of the day I put out my eye working on one. After that, I said, I would say goodbye to mechanical inventions and study the inventions of God. And that is what I sairly did, for most of the rest of my life. But there maun hae been something more, something deeper, something that cut closer to the heart of the way in which I was beginning to see the world."

You notice that he seems to be slipping in and out of dialect as he talks—not deliberately, now, as if trying to amuse or impress you, but in the manner of a bilingual person whose mind is so busy he cannot remember which language he is using. He leans forward in his chair, elbows on knees, the long-fingered hands gesturing for emphasis. "You know, not once did I take out a patent on my machines. Not my clocks, not my thermometers, not my student's desk, not even any of my factory machines. A fey and foolish thing to most people, I suppose."

"Probably. They say the wheel-making machine you invented for Osgood, Smith was used all over the country for more than fifty years. You could have made a fortune in royalties if you'd patented it. Why didn't you—no interest in money?"

He growls out a chuckle. "Weel, the fact of it was I truly didn't care much about money in those days. Or ever, for that matter. 'Twas a tool, nothing more, and it seemed to me that there was a guid deal more to life than the getting of it. Still, that was na the deep-down reason for my not patenting my machines. I had this belief, you see—and the guid God knows I believed it with all the passion of youth—that man was inevitably on the road to perfection. I believed that machines were part of that forward movement, that they would free men to pursue higher things, to learn more of God's great work in the world and their place in it. If that were the case, then machines had to be acts of God quite as much as creations of man, and therefore all improvements and inventions should be the common property of the human race. No inventor had the right *to profit by an invention. It was inspired by God and belonged to all mankind."*

"It's been more than a century since then. Can you still hold that belief?"

He leans back in the chair, passing a hand through rumpled hair that is half-gray, half-umber. "'Now a' is done that men can do,/ And a' is done in vain.' Burns. I dinna ken, lad, but that he was right. It's na in me to believe that man is doomed. I can't credit that God would have created such a complex and wondrous thing as man just to watch him strangle himself in his own blather. Still—it did not take me long to realize that machines were not freeing men, they were enslaving them. Inventions—aye, including my own—were appropriated by men with cold eyes and colder hearts. They robbed men of the joy of work, of the pleasures of craft and skill, and gave them nothing in return. I take no pleasure in

JOHN MUIR'S DESK IN HIS MARTINEZ, CALIFORNIA, HOME

remembering that it embittered me for a time. Do ye ken what I once wrote of men from the safety of my mountains?"

He tilts his head back and closes his eyes. "'As for the rough vertical animals called men, who occur in and on these mountains like sticks of condensed filth, I am not in contact *with them; I do not live with them.' Aye, I wrote that, out of a darkness of heart. I deplored the metallic, money-clinking crowds who dared defy what I felt the world should be. 'Tisn't easy to give up a dream."*

"Did you give it up, then?"

He laughs, leaning forward in his chair. "No! Not really. Oh, I revised that dream of perfection, I made allowances for the reality of things, but to the end of my days I hugged the chalice of possibility—that someday, somehow, man would transcend himself."

"And now—do you still think it is possible?"

The old man stares at you for a long time, drumming his fingers on the desk. He sighs once again and turns his head to stare into the darkness. After a while you realize that he is not going to answer you. Not yet at any rate.

"There were those who believed that man never really had much choice in the matter," you say, "that man himself was merely part of a vast machine called the universe, subservient to laws and instincts he couldn't control. Do you remember what Thomas Huxley said? 'The chess-board is the world; the pieces are the phenomena of the universe; the rules of the game are what we call the laws of Nature. The player on the other side is hidden from us. We know that his play is always fair, just, and patient. But also we know, to our cost, that he never overlooks a mistake, or makes the smallest allowance for ignorance.' Such a world was filled with teeth and talons, and the best a man could hope for was to survive—however he must."

The old man explodes out of his silence, thrusting forward in his chair and slapping the flat of his palm on the desk top. "Huxley—that bloodless coof!

That fool! He and his kind took the work of Darwin and twisted it to fit their vision of the world. And, damme, what a cold and heartless world they would have had it be! They called it 'survival of the fittest,' but no matter what they might have called it, it was a damnable theory, a dark chilly reasoning that chance and competition accounted for all things. Oh, it was a useful *theory—that I canna deny. It justified all manner of cruelty, just as my father's piety excused all manner of cruelty to his children. Should a man be inspired to destroy his best friend in the marketplace, why, he could shrug it off as the natural consequence of living in the great soulless machine of the cosmos. How could he, a mere man, be blamed for the laws of the universe?"*

"But it was a damnable theory, I tell you." His hands are now like hatchets chopping at the air. "Damnable because it ignored the one real truth of the world, the truth that lives in every rock, flower, leaf, tree, and animal—including man: it was all created by a loving God, and His love covers all the earth as the sky covers it, and fills it in every pore. God is no invisible chess player. He is all around us, in everything we touch and hear and see. All the things of which the world is made are sparks of the Divine Soul, whether clothed in flesh, leaves, water, or rock. Nor is God cold and unforgiving, never overlooking a mistake. Ye have to see, the race of man has been making nothing but *mistakes ever since Adam swallowed the juice of the apple, and the race of man is with us yet. Aye—the universe may be a machine, but if so, 'tis a machine created by a God whose only rule is the rule of love. And love does not mean competition among all the forms of life, it means cooperation, the maintenance of a world in which all forms of life have their place and their function."*

"And man is only one of those forms," you say.

"Aye. Unfortunately, he is the only form of life that has to be reminded of that fact. Lions and lambs dinna have to be told their place. The hawk and hare know where they are. Only man has the impudence to try to turn the world all tapsal-teerie."

"Tapsal-teerie?"

He laughs now, the anger drained in talk. "Yes, tapsal-teerie—the Scotch for topsy-turvy. Ye've just been given my famous tapsal-teerie lecture, patent pending."

In the silence that follows your answering laugh, you notice that the house itself has been speaking to you along with the old man. It vocalizes in whispers of creaking floorboards, in the muted groans of old joints and joists, and the rattling titter of ancient, wavery windowpanes touched by the wind in the darkness—an architectural conversation that accompanies and punctuates the flow of human words like some kind of Greek chorus as the night and the talk wear on.

With part of your mind you listen to this murmuring undercurrent, wondering what it is the old house is saying, what tidbits from the lives of those who have called the place home would be yours if only you had the wit to understand. What secrets of the night might be told you of the life of the loquacious and lyrical old man who sits before you? Were there bawdy bedroom moments when the flesh overcame the spirit of neat asceticism he carried about him like an aura? What angers overcame him—personal angers, irritations with his wife and children, complete with shouts and recriminations? What despairs did he allow himself in the midnight hours, what terrors belied the serenity of those agate eyes, what uncertainties welled up from the ocean of his subconscious? Were there times when he cursed his God of love, the God he saw in all the parts and portions of the earth—did he curse this God on the night that his wife died?

The wondering is a dull litany in your brain, a running counterpart to the

WILD FLOWERS, YOSEMITE VALLEY, CALIFORNIA

old man's words with their stately cadences and Godful images. Between them, they destroy time, and you are startled to see the ink of the night washed out to a deep gray by the spreading silver of the pre-dawn morning. "Aye," the old man says, "we've danced the whole night through. Come along, lad, I've one more thing to show ye."

You follow him out into the hallway and up the stairs to the attic, an immense place of gloom and artifacts. Another stairway leads to the bell tower. When you reach the top, the old man pulls the bell cord, sending a pure ringing note into the morning. He laughs silently. "That should give the park people something to wonder about. My Louie would use it to call me in from the fields for meals." The two of you stand at the eastward-facing windows of the cupola. "I loved to come up here at such times, just before the sun. Particularly in those years when I gave my life to the ranch. It reminded me, day after day, of the world I had left and the world to which I would return."

The sky lightens. There are no clouds, but the haze of the eastern horizon is thick enough to absorb a stain of lavender that slowly turns to pink and then to red against the china blue of the sky. A crescent of sun shows itself and creeps slowly upward. Below you, as the morning grows, the freeway fills with cars. The rush of their passing is like the sound of surf. "Beetles," the old man growls. "Where are they gaun in such a flichterin' rush and brattle?"

To do the work of the world, you reply. To push the buttons and shuffle the papers of civilization.

He grunts. "You asked me about machines. Weel, there you have 'em, and a sleekit, hurrying bunch they are. Better machines than my day ever knew, better than anything I could have sketched out of my dreams, better than anything I could have imagined. And they're not all. Your world is crowded with

machines, some of which think faster than the men who invented them, some of which can destroy you all, together with most o' the rest o' life. But hae ye once stopped to think what they mean? Do ye ken where they are takin' ye? Do they hae a purpose? *Or are they just there, clutterin' up the universe to no end but their own? Ye wondered earlier if I thought man could still transcend himself. Aye—I believe it yet. But before he does, he's gaun to be forced to answer sic questions, and answer them fast. And if he dinna, there'll be no blaming of God and the cosmos for it, lad. If man weeps out the end of his days on this earth, it will not have been the immutable laws of the universe that will have done it . It will be man himself, by choice and ignorance."*

The old man's eyes burn in the morning sun.

Months have passed. You and the old man are more than a hundred miles to the east now, in the granite-walled heart of his beloved Sierra. It is difficult to believe this valley. It is something to be felt, to be dreamed of, to be experienced, but not to be believed, something as unreal as a dream, an exercise of the imagination. It is too large a beauty to be fully embraced by the human mind. Perhaps if you, like the old man, had lived ten years of your life here, wandering its floor and climbing its walls, searching out all the secrets of the forces that had made it, gathering its plants, touching its trees, learning the conversation of its storms and seasons, perhaps then you could accept it. But you have not done that. Almost no one but the old man ever has.

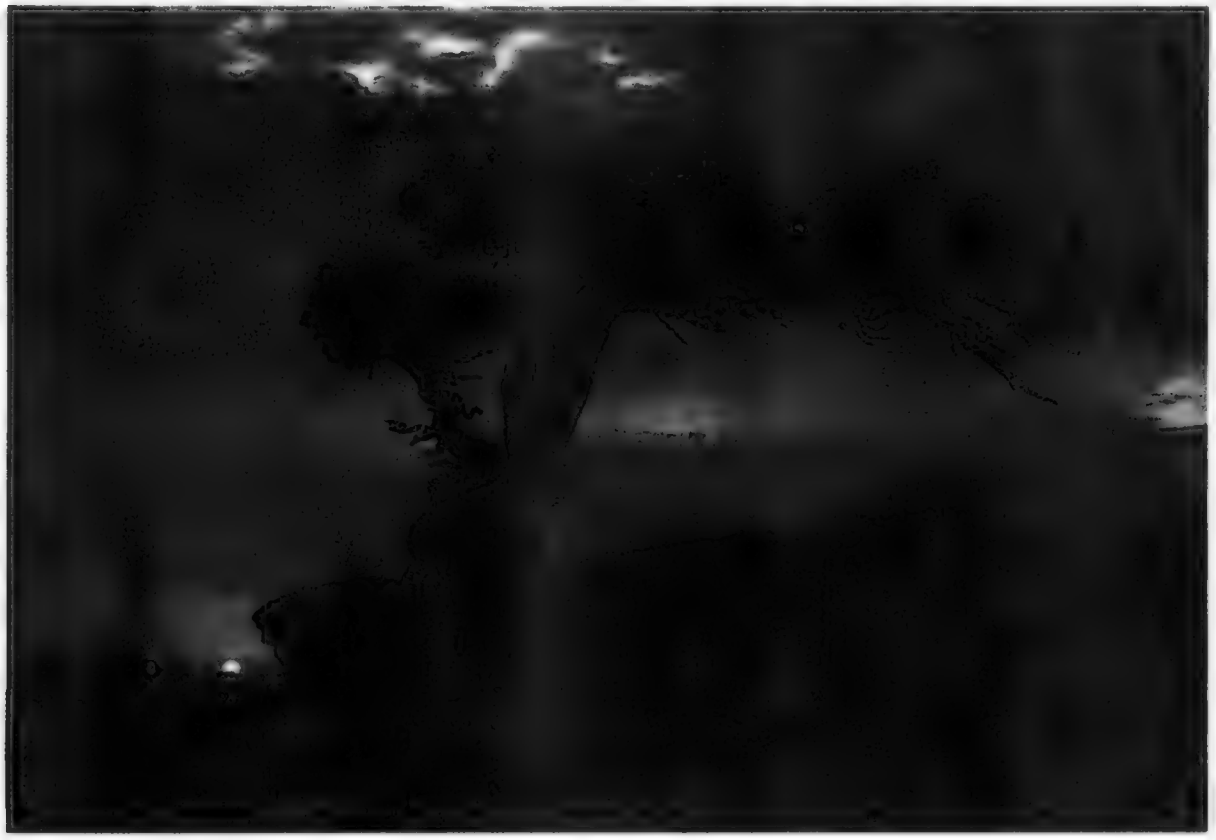
However, you know its names well enough: Bridalveil Fall, Cascade Fall, Vernal Fall, Nevada Fall, Yosemite Fall, upper and lower; Arch Rock, Pulpit Rock, Inspiration Point, Rocky Point, Clouds' Rest, El Capitan, Half Dome, North Dome, Glacier Point, Royal Arches, Washington Column; Merced River, Mirror Lake. You are standing now on Sunnyside Bench on the north wall of the valley, not far from lower Yosemite Fall and about five hundred feet above the valley floor. You have climbed here with the old man up a reasonably easy trail, though your mind has filled with images of plunging death and your city-trained body has objected every step of the way.

The old man has not been sympathetic. "Hurry, lad, hurry!" he has urged you while scrambling up the rocks like a mountain goat, casting impatient glances back at you. "It's worth dying to see this." You doubt it, but you follow him nevertheless. Resting now on the bench, surrounded by ferns and flowers and wild vines, with groves of oak and pine behind you and the whole length of the valley before you, you are tempted to believe him. A little to the west of where you are, lower Yosemite Fall spurts out over the lip of a cliff and tumbles down to the floor of the valley, its distant rumbling a steady mutter that fills the wind, its mist rising into the air above it like fog.

It is late afternoon in the early fall, and the old man has brought you up here because he has sniffed out an approaching storm, though all you can see are a few scattered clouds moving up toward the valley from the southwest. While you wait for something to happen, watching the shadows lengthening across the valley floor as the sun slips down the western sky, you tell the old man of a critic of mountain climbing you once read, whose conviction was that those who climb mountains are, in fact, insane, that God did not put mountains on the earth to satisfy the egos of those who would like to conquer them.

SUNSET ATOP SENTINEL DOME, YOSEMITE

FOLLOWING TWO PAGES: HALF DOME, YOSEMITE VALLEY, AND THE SIERRA NEVADA AS SEEN FROM NEAR GLACIER POINT



The old man laughs his barking laugh. "Aye, lad, if it's put that way, I canna but agree. God didna put the mountains there to satisfy anything in man. They have their own reason for being, and like the great sequoia, it has naught to do with man. But yeer birkie confused the issue."

"What do you mean?"

"He assumed that a man climbs a mountain to conquer it, to stand in triumph upon it."

"Well, doesn't he? Isn't that why he does it? Why else?"

"For some that is the reason, I'll agree. But not for all. Most sairly not for me."

"What, then?"

The old man rubs a finger up against his nose, a habit you have noticed he practices whenever he has to explain something he is not sure you will understand. "Weel, I'm not certain I can make it clear to ye. What I wanted above all else was to become part *of these mountains, to be accepted as one with them. I didna see them as enemies who had thrown up obstacles and redoubts to prevent my advance. I saw them as friends who offered paths for me to follow, if I could but see them. And the paths were always there, lad, in every cliff and overhang and chimney, on every ridge and slope, the way was shown, always. The mountains welcome those who will accept them for what they are. Those who approach them in any other way demean both themselves and the mountains." The old man walked to the edge of the bench. "Come here, lad, this is what we came to see."*

You join him and marvel at the perception of the man who has brought you here. The scattered clouds you had noticed earlier have gathered together now, rolling and boiling in a heavy yellow-black mass on the other side of the valley. The wind has picked up, whipping cold drafts of its breath against you. Beneath the mountain of clouds you can see strands of rain begin to touch down on the swelling crest of Half Dome. The pine forests on the opposite slope are soon shrouded in mist, which lies over them like a blanket drawn up over the face of a dead man. Flashes of

lightning crackle down, editorial comments from God. It is a spectacular show, and it is a long time before you notice that the storm has moved across the distance between the two walls of Yosemite, filling the valley floor with clouds, filling the sky above you with their moving, cottony presence.

"This is where it began for you, isn't it?" you ask.

The old man shakes his head slowly, his gaze on the sky. "No, not really. It began a long time before that—aye, perhaps as long before as my childhood in Dunbar, when I heard my first bird singing joy to the morning. Or when I found a nest of baby mice in a haystack, no bigger than shrimp and just as pink, new with life. But ye're right, in a way. It was here, in this valley, in these mountains, that my life took on purpose, almost as if the guid God himself had been saving it for me—or me for it."

"We haven't done as well by this valley as we might have."

"No, no, ye haven't. But, God help me, I can take some of the blame for that. When they first wanted to bring automobiles into the valley, I said let them—let those snorting beasts mix their fumes with the smell of the pines. It wouldn't make any difference, I said." He rubs the back of his neck with a hand. "Jimmie Bryce knew better."

"Jimmie Bryce?"

"James Bryce, British ambassador to the United States when I knew him. He was a Scotsman, too, and a lover of the valley, and it sorrows me to know that he saw farther into the future than I could. It was in 1912 or 1913 that he he said it: 'If Adam had known what harm the serpent was going to work, he would have tried to prevent him from finding lodgment in Eden; and if you were to realize what the result of the automobile will be in that wonderful, that incomparable valley, you will keep it out.' Aye, he knew and I didn't."

"We've learned since, I think—I hope."

'Tis not enough to hope. Ye have to work for it—I learned that much. And if ye don't," he adds, spreading his arms in a symbolic embrace, "if ye canna preserve the oldest and best of all the parks, what is there left for the rest of yeer warl?"

The clouds by now have towered over you and beyond you. It is as if you stood at the base of a great black wave that was ready to break into foam and speed to death on a beach lost in the mists of horizon. The wind is cold and heavy with moisture. Soon rain splatters at your feet, great pounding drops that create little craters in the earth. You are quickly wet, but the old man does not seem to notice your discomfort. He stands in the middle of the storm, his face turned up into the force of its rain, the look of a crazy man on his face. You tug at his sleeve, and slowly, slowly, he turns to you.

"Isn't it time we left?" you ask.

"Leave? Great God, mon! Would ye be at home, dry and defrauded of all the glory of this storm? Your soul would starve in the midst of abundance. Listen, lad, listen to what the storm would teach you. You are part of this world, not something that walks about in it without connection. You are one with everything in it—rocks, flowers, trees, soil, storms, mountains. Do ye na see that that is what ye must learn, all of ye? Ye're the best that the earth has produced, but ye've been produced by the earth, not separate from it. Ye're earthly beings, the highest of all earthly beings, but ye're highest because all other forms of life have flowed into ye, yeer being has flowed through all other forms and ye've taken parts of them with ye, absorbing and assimilating portions of them into yourself. Ye're a being most richly divine because most richly terrestrial, just as a river becomes rich by flowing

MIST TRAIL NEAR VERNAL FALLS, YOSEMITE

on through all its climes and rocks, through all its mountains and valleys, constantly taking parts of the earth with it. This storm is part of all that, part of what the earth has to give ye."

But you must leave, you say. You fear the darkness of the trail, the uncertainty of your return.

"Aye, go then. Leave me here."

You go back to the thin pathway and begin making your way down to the valley floor, to dryness and safety. Looking back, you can just barely see him outlined like a shadow against the curtain of rain. His face is still turned up into the falling water, as if he were standing beneath one of the great falls of the valley.

T. H. Watkins *is a former editor of this magazine and is author of twelve books and more than seventy magazine articles.* **Dewitt Jones** *produces films for television and is a professional still photographer. Two of his films, "John Muir's High Sierra" and "Climb" were nominated for Academy Awards in 1975.*

Desert Magic

Water is the key to survival in the desert—and a few remarkable plants have learned the secrets of getting it, holding it, and existing without it most of the time.

Text and photographs by Steve Crouch

JOHN STEINBECK once accompanied his friend Ed Ricketts on a voyage to the Sea of Cortez to collect marine life. During the course of the expedition, he learned a great deal about the life processes of the organisms they found. In writing about them he observed that survival is the first commandment for all living things. All the organisms' tricks and mechanisms, whether ultimately successful or not, are aimed at that one end. Everything else is secondary—even reproduction and the other functions attendant to the perpetuation of the species follow after the certainty of individual survival.

This law is nowhere more evident than in the lives of plants peculiar to the American deserts. Within this arid habitat, plants have three simple but demanding tasks: to get water when they can, to hold on to it after they get it, and to exist without it most of the time.

It would seem to most casual observers that plants in the desert must struggle against great odds to exist at all. Still, when everything is right, they function as do plants anywhere; they burst out in green foliage, they flower, produce seed, and perpetuate the species. One would think that a more generous climate would make their task much easier—yet when they are moved to a milder climate they die or, at best, they do poorly. The harshness of the desert seems insurmountable only to those that are unequipped to cope with it.

Look closely at the desert; see how plants stand apart. On the driest deserts, there is wide spacing between each creosote bush, each bur sage. Even grass grows only in clumps or hummocks, taking care that roots do not compete for water with a nearby clump. Desert plants are, for the most part, dependent upon shallow root systems, spread wide to catch rain that may penetrate only an inch into the soil. There can be no appreciable competition between plants—there is not sufficient moisture to sustain two root systems occupying the same space.

There are members of the cactus family, not of the desert, that are as leaved as any ordinary plant. But the cacti of the desert have long since abandoned leaves, those appendages normally involved in photosynthesis, the conversion of sunlight into sugar, during which moisture is lost by transpiration through minute openings.

To reduce this loss, desert cacti have shed their leaves, and photosynthesis is carried on by the green stem of the plant itself. Its spines are the vestigial remnants of those long-gone leaves. On some varieties, spines grow so thickly they serve to shade the plant from the sun.

The accordion-pleated saguaro is able to expand or contract its bulk according to the moisture hoarded in its pulpy interior. When a year or more goes by without rain, the pleats grow deeper and deeper, the trunk looking ever more shriveled. Yet let one reasonable rain soak the ground around it, and its roots will suck up two or three tons of water. Within days it will expand and become fat and flourishing.

A fully branched saguaro may weigh eight or nine tons; most of this is water. It needs much and has developed special techniques to get it. When rain falls, the saguaro within hours develops tiny, hairlike "rain roots" to assist in harvesting every available ounce. When the ground is dry, the rootlets disintegrate and only the larger roots are left to anchor the saguaro in the earth.

THIS LACK of leaves is not particularly unusual in the desert. In milder climates, plants drop their leaves at the onset of cold; in the desert, the onset of drought is the signal for the leaves to fall. Ocotillos send long branches up from the central crown root. Most of the year, these limbs are bare. Within two or three days after a rain, their branches are thickly covered with dark green leaves. When

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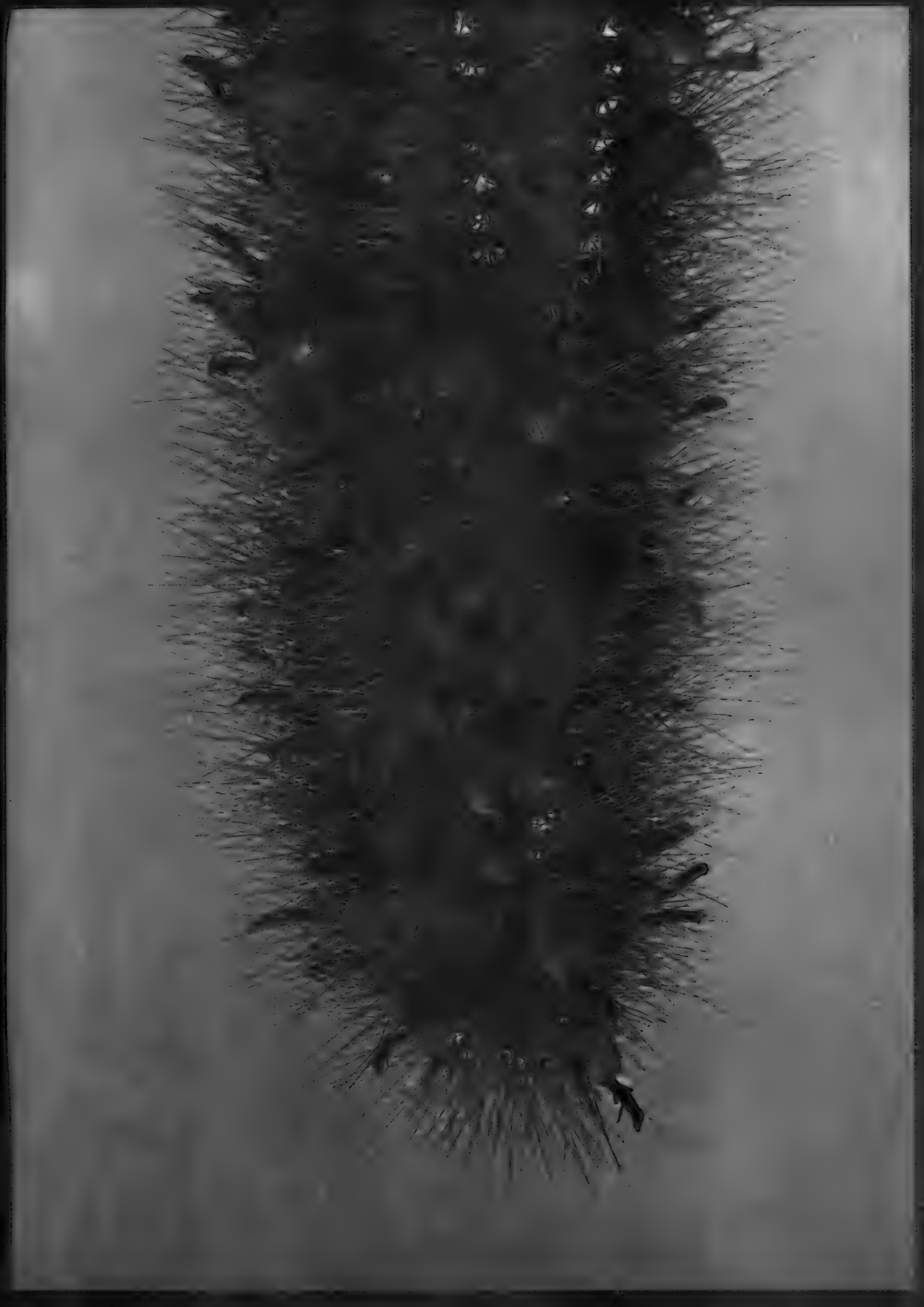
This article is adapted from material in Desert Country *by Steve Crouch, being released in April by the American West Publishing Company.*

Barbs and spines of the brilliantly colored agave give a sharp rebuff to animals that might dare to browse upon its fat stems.

The cactus forest covering most of Baja California's dry peninsula is home to many exotic plants that grow nowhere else on earth.



the earth has dried, the leaves fall and once again the ocotillo stands naked against the harsh land.

Among a host of leguminous plants of the desert, palo verdes from a distance always seem to be in leaf. Yet close examination shows only tiny, green twigs and branchlets—no sign of leaves. Only after rains fall do these trees break out in leafy bud to flower and then retreat into dormancy again with the coming of drought. Plant dormancy is never complete; there is green chlorophyll in the bark, branches, and twigs of the palo verde to continue photosynthesis, at a reduced rate, within the plant even in the driest of times.

There are many members of the pea family numbered among the desert plants that stand and endure the worst this climate has to offer—palo verde, mesquite, senna, acacia, fairy duster, indigo bush, smoke tree, ironwood. After rain comes and the sands within the washes hold stores of water that bathe their roots, they break forth in such a frenzy of bloom that the air for miles is heavy with their perfume.

Probably the toughest of plants, the creosote bush is the most widespread of all in warmer deserts of the New World. It grows farthest north in that indefinite zone where the Mojave meets the Great Basin desert. It grows in the saguaro desert of Arizona and Sonora, on the sterile lands around the Salton Sea, among the boojums of Baja California. It endures the worst the desert can offer in the sub-sealevel sink of Death Valley, and it climbs nine thousand feet on the altiplano in Zacatecas far south in Mexico. The same plant grows in arid lands in Texas and on the deserts below the equator in Chile and Argentina. No one knows whether it spread south from Arizona to Argentina or worked its way north. But it is a sure mark of the desert wherever it is encountered.

It is not a tall, tree-like shrub; its many well-spaced branches usually rise to a height of only four or five feet. On these branches are small leaves just a quarter-inch or so in length. Each bush, in places where drought is frequent, stands well apart from its fellows so that roots will not compete with each other for the little moisture available. This, with its small leaves and well-spaced branches, makes the plant seem airy and rather frail and insubstantial. Nothing could be farther from the fact.

This tough creosote bush has adapted to the desert better than any other plant that grows there. Where Joshua tree, saguaro, and cholla grow, there the creosote bush flourishes; when barren soil stops the others, the creosote bush marches on. It is everywhere on these warm deserts, except upon the saline playas that are too poisonous to support any plant.

Its leaves are covered with a waxy resin that prevents excessive loss of moisture; crushed between the fingers, it leaves a sticky residue like freshly applied glue. When drought comes, the bright green leaves drop, leaving yellowish ones to carry on the reduced functions of the plant. Let drought continue and grow severe, and these leaves will fall and only brown, dead-looking ones will remain upon the branches. At those times, practically all growth stops; the creosote bush almost ceases to be a viable entity until rains return. Then leaves break out green again, the plant is covered with lovely yellow blossoms, and the creosote bush seems none the worse for its experience.

Nothing much feeds upon this plant except an occasional rabbit that may sometimes nibble in passing. Only the camel, introduced here by Americans a century and a quarter ago, found the creosote bush to its liking. The camels have been gone for seventy-five years. The creosote bush seems likely to remain as long as the land is arid.

THESE PERENNIALS—creosote bush and bur sage, mesquite and palo verde, boojum and saguaro—are drought resisters condemned to stand fast in the middle of great aridity. There are drought evaders that grow here, also—annuals that sprout, grow, flower, and die in the short time that desert sands hold water after summer or winter rains. The rest of the time, ten months or more of every year, they exist only as seeds hidden beneath a thin scarf of sand or blown about by desert winds. No matter, they are beyond any damage that heat and drought can inflict. They wait until conditions are exactly right before they come to life again.

These drought evaders are the plants that in wet years cover the floor of the desert with a great carpet of blossoms —poppies, phacelias, verbenas, primroses, and a dozen other brilliant kinds of bloom. Sandy wastes disappear under a blanket of brightness. Nowhere else does such a riotous abandon of color occur as among the slopes and dunes of the California desert. They must be seen to be believed. No words can match their splendor.

In some marvelous way, these seeds have developed mechanisms that work to restrain germination until a series of conditions have been precisely met. Seeds of spring annuals only germinate when watered by cool rains during times of lower temperatures; summer annuals must have warm rain and high temperatures. Both kinds refuse to bestir themselves if there has been insufficient rain—as if they knew how much was required to see them through their short life. Only parts of the seeds of some plants will germinate; the rest are held back in case of failure of the first crop to provide a reserve for later success.

One scientist has put it very well in commenting on the particularity that desert seeds exhibit in germinating or not. This insistence on optimum conditions before coming to life, the good savant refers to as "birth control." Botanists have theorized in dry technical terms about what causes the seeds to do as they do. Probably they are right, but desert lovers look upon it as a kind of magic sufficient unto itself.

Steve Crouch *is a Carmel, California, photographer and author of the award-winning book* Steinbeck Country.

When water is plentiful, ripe fruit grows thick among the grizzled spines that give the* senita *its common name, "old man cactus."

The Living Past

Flatboat on the Willamette

by Clarice R. Rainey

THERE IS ALWAYS the danger in the study of history that our feeling for what the past was really like may be buried beneath an avalanche of facts, dates, and names. Such need not be the case, however, as the efforts of ninth-grade instructor David Curran convincingly demonstrate.

Last year, not content with sticking close to the textbook, Curran led his Philomath, Oregon, high school students on an adventure straight from the pages of history. This enthusiastic teacher, anxious to revitalize his classes so they would become challenging for his American history students, picked a project that brought them literally out of their desks and out-of-doors—the construction of an eight-thousand-pound flatboat in the school parking lot, followed by a memorable voyage down Oregon's Willamette River.

Curran and his students were re-creating an aspect of American history that dates back to the late eighteenth century, when satisfactory roads were practically nonexistent beyond the eastern seaboard. For settlers on the trans-Appalachian frontier, rivers formed ideal channels of communication to the new lands of the Ohio and Mississippi valleys. Thousands of emigrants purchased or built flatboats along the wooded banks of the Ohio, and then with families, belongings, and livestock loaded on board, and usually in the company of other flatboats, hazarded the voyage downriver to the Mississippi. Many drifted as far south as New Orleans, a journey that might take five or six weeks.

As the river valleys grew more settled, the boxy scows continued in use unabated, now serving as the primary means of transporting crops and produce from backwoods settlements and river towns to market. Because this method of hauling cargo was so cheap, the flatboat era continued well into the age of the steamboat, and as late as 1846 nearly three thousand flatboats drifted down the Missouri and Mississippi rivers to New Orleans.

Shallow in draft and usually incorporating a house-like shelter in their design, flatboats ranged from about twenty to sixty feet in length and from ten to twenty-five feet in width. Built from rough-sawn green timber, they were fastened together with wooden pegs. Flatboatmen usually navigated

RANDY WOOD, ALBANY DEMOCRAT HERALD

their craft with three long sweeps, or oarlike poles. Two served as oars, adding a bit of speed in sluggish waters and better control in fast-moving currents, while a third, controlled from atop the cabin, served as rudder. (Some flatboats had a single sweep forward and another aft.)

Unlike the narrower keelboats of the same era, flatboats were too unwieldy to navigate upstream against the current, and the flatboatmen, after unloading their goods at their final destination, tore the boats apart to sell for building materials or firewood.

Afer researching flatboat construction at four university libraries, Curran was able to draw up plans for a faithful replica. Meanwhile his classes researched and studied eighteenth- and nineteenth-century American culture, clothing, and tools. The project gained added impetus when the Benton County Bicentennial Committee agreed to sponsor the projected voyage as an official Bicentennial event. With the approval of the school administration and school board, plus generous donations of lumber and materials from local merchants, the flatboat became a reality.

The students did virtually all the work of construction, Curran's total physical involvement amounting "to driving one nail." The completed replica varied from the historical models in only two significant aspects: instead of using wooden pegs for fasteners as the pioneers did, Curran's students substituted steel spikes and nails; and a reinforcement of steel cable was added to the bottom of the craft for safety. "The primary objective was to make the deck secure so it could withstand running against gravel bars or bumping into bridges," Curran explained.

With construction completed, the next major project was to move the four-ton boat to Corvallis, Oregon, and the Willamette River, several miles to the east. Again local industry came to the rescue by providing the machines and trucks to load, transport, and unload the flatboat, now dubbed "The Spirit of '76."

This was the part of the project Curran had been waiting for: "The students were about to simulate an era from America's past. They were reliving history by actually going through the identical situations the pioneers experienced. Through this, the students began to feel a close empathy with the early settlers who traveled via flatboat."

In currents, obstacles, and channels the Willamette River furnished a reasonable facsimile of the Mississippi. Curran anticipated that "if the good Lord's willing and the river stays high, we should be able to float to Salem [the state capital, some fifty miles downstream from the launching point] in five days."

Each day a new crew boarded "The Spirit of '76," giving all 105 of Curran's students a chance to relive history. At the end of the day, the flatboat was tied along the shore, and the crew was transported by school vans back to Philomath.

Maneuvering an unwieldy craft down a river known for its tricky currents and sandbars was challenging and tiring work. Each student took his or her turn guiding the boat with the giant sweeps, discovering that it required not only skill but strength and agility as well. "The students encountered stress, fear, and fatigue," recalls Curran.

To add to the adventure, the Willamette River offered a few lessons of its own. When the boat was only two hundred yards from its launching site, Old Man River playfully swept it into the riverbank, and on nearly every succeeding day gravel bars were responsible for a bundle of blisters and sunburns as teacher and students spent hours wrestling the stubborn craft back into deep water. On one occasion the river gave the crew a few panicky minutes and a hard jolt, shoving them into bridge pilings as they passed Albany, Oregon. Quick work with poles freed the flatboat, however, and sent it on its way.

One evening the group encountered strong currents while they were attempting to make shore at the end of the day. "It was ironic," recalls Curran. "One of the girls impulsively grabbed the overhanging tree branches as we came in because we were being swept downstream, and she hung on. Others followed suit, and we were able to bring the boat to shore. Then I remembered from my research that this was precisely what the early pioneers did to draw their flatboats in when the current was swift. An impulse reaction became a repeat of a pioneer method of bringing a flatboat to shore."

Student reactions were varied but unanimously enthusiastic. Chris Jensen said, "The rowing was the hardest part of the trip. We all took turns rowing and steering with the sweeps. One of my jobs was pushing off the bank with the poles; it was hard work."

Running up on a gravel bar left Evan Robinson with a vivid recollection of his day's float: "The currents and gravel bars can be tricky. Those pioneers on flatboats really had to work to make it to their destination."

Martin Schultz opted for pioneer times. "I would rather have lived back in those times. There weren't as many people, so much pollution, or as many problems. Yes, if I had the choice, I would have picked that period of America's past over the present."

To the observer, the authenticity of the flatboat seemed complete. An old steamer trunk sitting on the deck turned out to be the only link with the present. As the flatboat docked at each day's end, the crew opened the trunk, and its contents became known: hot dogs, potato chips, and soft drinks. Within minutes, a crackling bonfire and the aroma of sizzling wieners filled the air.

A century and a half ago, settlers would have gazed in wonderment and curiosity at the evening meal. No deer jerky, biscuits, or cheese? But their twentieth-century descendants happily continued their picnic, wiser for their brush with the past, and much too hungry to mind one slip in authenticity.

Clarice R. Rainey *is a free-lance writer and a physical education consultant in the Albany, Oregon, elementary schools.*

Overleaf: "Hard upon the beech oar!—She moves too slow!" Junior high students from Philomath, Oregon, rediscover the meaning of an old boatmen's song as they struggle to free their flatboat from a Willamette River gravel bar.

JIM GORHAM

A Matter of Opinion

Drain Hetch Hetchy?

CITY AND COUNTY OF SAN FRANCISCO

JOHN DURYEA

Yosemite's Hetch Hetchy Valley as it appeared in 1913—and as it is today, a reservoir for San Francisco's water system.

"In personal terms the successful fight to have Yosemite Valley included in the National Park was perhaps [John] Muir's greatest triumph," notes T. H. Watkins in a forthcoming biography of Muir. [An excerpt from the book appears on pages 30–41 of this issue.] Paradoxically, the loss in 1913 of the equally magnificent Hetch Hetchy Valley from that same park—for use as a reservoir for San Francisco's water supply—was his greatest tragedy, "one that would exhaust his mind and heart and bring him as close to despair and bitterness as anything in his life." In the November 11, 1975, issue of City of San Francisco *magazine, writer Tom DeVries, reasoning that man's ravages upon nature are not necessarily irreversible, makes a startling proposal for Hetch Hetchy; the following excerpt from his article is reprinted with the kind permission of the aforementioned publication:*

HETCH HETCHY is San Francisco's beautiful bathtub. It is the seven-mile-long artificial lake within Yosemite National Park just below four thousand feet elevation that the city uses to store its water and generate electricity—most of which it sells off at bargain basement rates to Central Valley cities, agribusiness, and industry. Like many of the facilities California created to move water here and there, it probably seemed like a good idea once. Now, as Yosemite's superintendent says, "In retrospect, it seems like a damn shame."

Hetch Hetchy is nature's mirror held to Yosemite Valley. About half the size, it is a steep twenty miles north of the latter, an hour closer by road to San Francisco along the magnificent corridor of the Tuolumne River on its way to the Central Valley. "It is," said John Muir, godfather to Yosemite Park, "a wonderfully exact counterpart of the Merced Yosemite, not only in its sublime rocks and waterfalls but in the gardens, groves and meadows of its flowery park-like floor."

Yosemite Valley is full—full of people, motels, shops, and smog. More than two million people a year visit this superstar National Park, most of them collecting in a few square miles of Yosemite Valley. Visits are up this year and in their cautious way, even the good old Park Service concedes to the fact of overuse.

The pressure to build more motel rooms and parking lots for Winnebagos is nearly overwhelming. Yosemite National Park and Shop, the young rangers call it. "Sublime," John Muir wrote, "a temple," "fine and reassuring."

And it is, still, all those things. But it is full. The nicest

Continued on page 63

A MATTER OF OPINION *is provided as an open forum. Contributions from our readers are invited, but should be limited to 750 words and must be signed.*

Kinsey, Photographer

REVIEWED BY ROBERT WEINSTEIN

THIS two-volume work, an edited selection of Pacific Northwest photographs made jointly by Darius and Tabitha Kinsey over five decades, is uncommon in its excellence. Each of the elements of distinguished bookmaking is combined herein with grace and care. The format of the volumes, a lavish 12⅞ inches by 10¼ inches, affords matchless presentation of the Kinsey images. Typography, design, paper, printing, and fidelity of reproduction—all are flawless, verifying the heavy expense required for this act of faith.

Kinsey, Photographer (The Family Album and Other Early Work and **The Magnificent Years)** by Dave Bohn and Rodolfo Petschek with 200 black-and-white photographs *(Scrimshaw Press, San Francisco, 1975; 2 vols. of 160 pp. each, $150 the set).*

The editors, Dave Bohn and Rodolfo Petschek, have given their hearts completely to this northwestern Washington couple, who were unassuming, hard-working, and almost ignored in their modesty. The two volumes are the public evidence of Bohn and Petschek's act of love. As photographers themselves and committed conservationists, they discovered the remaining Kinsey negatives, including many eleven-by-fourteen-inch plates, and were deeply convinced that the Kinsey collection represented a great deal more than a simple documentation of the history of logging in western Washington, circa 1900–1940.

The plates were previously owned by a Seattle photographer, Jesse Ebert, who had purchased the three thousand existing negatives from Kinsey's widow, Tabitha, in 1946. In 1952 Ebert initiated attempts to place the collection in such august institutions as Yale University, the Bancroft Library, and the University of Washington. But having

languished in obscurity, the collection was little known and too little valued. Everyone either haggled over the price or wanted the negatives donated gratis. All such efforts failed, and in 1971 Bohn and Petschek purchased the collection, providing the enthusiasm, devotion, and judgment needed to insure the Kinseys, at last, some of the widespread recognition and esteem their work has justifiably earned.

Convinced of the worth of the photographs as social documents, and even more as aesthetic statements of the first rank, the two editors determined to present the Kinseys' photographs in the finest possible style, matching their efforts to their own appreciation and regard.

For three years, while Rodolfo Petschek produced matchless prints from the negatives, Dave Bohn researched the lives of both Kinseys, Darius and Tabitha, with great thoroughness. No stone was left unturned; no living informant seems to have been overlooked. Bohn obtained, and offers in these volumes, long statements by the Kinsey children, Dorothea and Darius, Jr.—detailed remembrances of unremitting work and endless familial affection. Similar memoirs from friends and acquaintances flash out in brilliant glimpses both Kinseys' devotion to the rigors of running a photographic business on Washington's northwestern frontier. Much is revealed of Darius's relentless zeal behind the lens, matched by Tabitha's almost sacred acceptance of superb performance, daily for fifty years, in her darkroom at their home in Sedro Wooley. The Kinsey children in their statements innocently remark on the apparent obsession that marked their two parents' regard for the work they had undertaken.

Kinsey's enormous labor, perhaps the keystone of his life and accomplishments, was the creation of a remarkable photographic record, a visual document of the logging industry in the Pacific Northwest. Many lumbermen have contributed for these volumes their vivid memories of Darius Kinsey at his work. None of them fails to recall how impressive was Kinsey's apparently endless, driving energy nor his unbreakable will for perfection of performance. Only the best vantage point from which to photograph, often the most difficult one to reach in the dense forest, the most inaccessible, would serve Kinsey's needs. They marvel at the remarkable clarity of his forest photographs—his ability to reproduce unshadowed images in the gloomy forests. They all testify

Continued on page 59

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With Santa Anna in Texas

REVIEWED BY GEORGE WILLIAMS

THE ALAMO, a Texas fortress not entirely worthy of defense, fell to the Mexican army of General Santa Anna on March 6, 1836. Col. William Travis and some 180 Texan and Mexican supporters died because he ignored an order to evacuate it. Nevertheless, Travis and his men wrote an important page in history through their bloody and futile defense of this fort.

With Santa Anna in Texas: A Personal Narrative of the Revolution by José Enrique de la Peña translated and edited by Carmen Perry with an introduction by Llerena Friend *(Texas A & M University, College Station, 1975; 202 pp., illus., index, $10.00).*

This translation by Carmen Perry offers an excellent treatment of a biased but generally accurate and informative personal narrative of the Texas campaign and the fall of the Alamo, as written by a junior member of Santa Anna's Mexican army, José Enrique de la Peña. Highly incensed by what he believed were the careless and thoughtless actions of Santa Anna, de Peña sets out in his diary to vindicate the "corrupted and tarnished honor" of the army and nation, supposedly damaged and shamed by the deeds of this Mexican president and general during the Texas campaign.

De Peña describes an army that was not prepared to wage a full-scale war in Texas due to a badly depleted public treasury that resulted in shortages of food, ammunition, and other important war-making materials. Moreover, he is concerned both with the low morale of the army, with its inept and poorly trained recruits, and with the lack of adequate military organization for waging a successful campaign.

The author also describes many timid, irresolute, dilatory, and bloody actions that plagued the army of Santa Anna and his compatriots, including the slaughter of the Alamo defenders, the cold-blooded murder of prisoners at Goliad, and the failure of Santa Anna to seize the initiative and pursue the enemy into the heartland of Texas. Instead, Santa Anna cited lack of food and supplies, and retreated toward Mexico. De Peña suggests that the retreat was poorly planned, and that a stronger enemy than the Texans might have wrecked the tired, hungry, and thirsty Mexican army. He claims, moreover, that a strong Mexican navy could have blockaded Texas seaports and forced the enemy into submission.

The narrative also offers valuable research material for students and professors of military history. De Peña presents numerous examples that demonstrate the need for "prudence, patience, planning, order, foresight, clear and precise judgment" to wage successful wars, and compares the Mexican situation with campaigns waged by Napoleon, Louis XIV, and other military giants of history. Finally, he offers begrudging praise for the defenders of the Alamo, and he also strongly suggests the Texans were the aggressors and ingrates, not the Mexicans.

An earlier translation of the same diaries by José Sanchez Garza distorts the intent of the writer as this Perry version apparently does not. José Enrique de la Peña is an accomplished writer, and his translated diary flows smoothly as he discredits Santa Anna and describes the events leading directly to the fall of the Alamo, as well as the events that led to the subsequent retreat and collapse of the Mexican army under the command of Santa Anna.

For a simple and detailed secondary source approach to the Alamo, the reader should explore *A Time to Stand*, written by Walter Lord in 1962. It contains excellent bibliographical references and offers a contrasting but biased American treatment of the Texas campaign. Readers are also directed to a biography by Oakah L. Jones, Jr., on Santa Anna, and to José Sanchez Garza's 1955 translation of the de Peña narrative, *Manuscrito inedito de 1836 por un oficial de Santa Anna.*

George Williams *is a consultant on higher education and a recent teacher-administrator at the University of Denver.*

The Lands No One Knows

REVIEWED BY WILLIAM M. APPLE

AMONG THE WRITERS of the West and its history, one of the most prolific and articulate is T. H. Watkins. His latest work, *The Lands No One Knows,* concerns the public domain. It is an extensive treatment of this subject, based on research by Charles S. Watson, Jr., whose name is also credited as coauthor.

The Lands No One Knows: America and the Public Domain by T. H. Watkins and Charles S. Watson, Jr. *(Sierra Club, San Francisco, 1975; 256 pp., preface, illus., biblio., appens., notes, wilderness index, index, $9.95).*

When we consider that this country started out with 300 million acres in the original public domain and acquired almost 2 billion more acres through the years, we begin to wonder where it all went—today only 453 million acres remain in the public domain, nearly all of it in the West. This book tells us where it went. We probably won't like what we learn, but it might make us a little more aware of the real estate thievery that has been going on since the last century—a natural consequence, perhaps, of the general attitude that land is money, a commodity to buy and sell rather than to be managed as a resource.

The author cites every federal law passed over the years pertaining to public land and explains the acts in terms that can be understood. Many well-meaning laws were passed to encourage settlement of the West, perhaps too successfully contributing to the diminishment of the public domain. And omissions and oversights in the various land laws opened the gate to the unscrupulous. Huge tracts of timberland were stripped by lumbermen, and millions of acres went to the railroads as rewards for their transcontinental lines.

Of particular interest is the corruption associated with the various federal land acts. Sharp operators knew how to make money off the government, and they did. Early in the last century, unregulated state banks were created by the hundreds to manipulate credit. Many an honest settler found himself at the mercy of the banks and speculators in order to pay for his 160 acres as required under the 1804 Land Act.

This situation continued until the Homestead Act of 1862, signed by President Lincoln, which said that any head of household or person over twenty-one had a right to 160 acres of the surveyed public lands, subject only to nominal fees and requirements.

By this time much of the territory still available for settlement was land too arid to farm. One senator viewed the legislation this way: "The government bets 160 acres against the entry fee . . . that the settler can't live on the land for five years without starving to death." Despite all this, some 80 million more acres were claimed by 1900 under the Homestead Act.

Looking at our present condition, this book sadly points out the ruination taking place on the western rangelands and to most of the wildlife they have supported. Also discussed are such far-ranging items as the oil pollution off our coasts, plant life destruction from irresponsible use of motorcycles and cars, and the plight of the American Indian. The book is thoroughly illustrated with appropriate photographs.

One may still hope after reading this account that more could be done by way of federal legislation to improve conditions in what is left of the public domain. But perhaps the legislators are more interested in securing unemployment checks and food stamps for their constituents. The author cites a quotation which seems appropriate: "It seemed very strange that a citizen who comes asking for handouts from the public trough should be treated with great kindness and time-consuming consideration—and one who is trying to protect the long-range interests of the nation in regard to the use of federal lands should be treated in quite a critical and unsympathetic way."

William M. Apple *is a past president of the National Wildlife Federation and a former newspaper and radio commentator on conservation and wildlife.*

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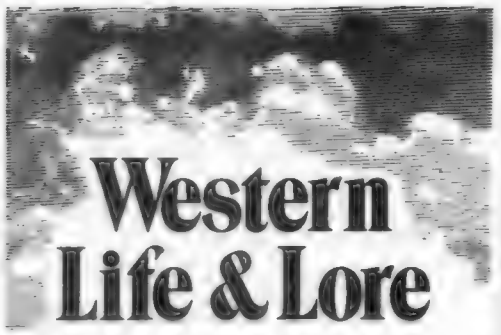

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Butch Cassidy, My Brother

REVIEWED BY ALLEN D. BRECK

Butch Cassidy, My Brother by Lula Parker Betenson as told to Dora Flack with a foreword by Robert Redford *(Brigham Young University, Provo, 1975; 265 pp., preface, illus., maps, biblio., appen., index, $7.95).*

AS ROBERT REDFORD puts it in this book's foreword, "When Butch and Sundance ran forward into the sunset, many hearts ran with them. Somehow they captured a piece of our past that was nostalgic. To us it was also synonymous with romance, free spirit, and the frontier enterprise with a smile on its face." In the swashbuckling film, "Butch Cassidy and the Sundance Kid," we saw not a gang of ruthless killers, but rather a group of high-spirited young men in search of adventure, determined to get even with people who were "despoiling America"—cattle barons, bankers, railroaders.

Now we have a fine book which tells us what turned the son of a pious, hard-working Mormon farm family into an outlaw, why he was continually in flight from the law, what the real facts of his inner life were, and how his personality influenced those around him.

Mrs. Lula Parker Betenson, now over ninety years old, has broken a forty-year-long, self-imposed silence to give a remarkably candid account of the life of her brother, Robert LeRoy Parker (1866–1937). [An excerpt from the book appeared in the May 1975 issue of THE AMERICAN WEST.] She traces the story of the Parker, Hartley, and Gillie families from their lives in the British Isles to their arrival with handcarts and wagon trains in Utah. It is a record of indomitable faith, courage, and hard work. We see people dedicated to a cause, stern, enterprising, zealous, with great love of family and kindness toward neighbors.

On the Parker ranch outside Circleville in southwestern Utah, young Bob grew up, only to fall in with bad company (among them a certain Mike Cassidy) and to leave home for good. We see him in 1889 at the age of eighteen, robbing the bank in the wide-open, roaring mining town of Telluride. A wanted criminal, he fled, working as a ranch hand and finally organizing "the Wild Bunch"—its headquarters, Robbers' Roost, an impregnable stronghold among the rocks of southeastern Utah.

Imprisoned in the Wyoming State Penitentiary for one and a half years for stealing a horse valued at fifty dollars, he became increasingly convinced that the law protected only the rich and powerful. Pardoned at last, he and others robbed the bank at Montpelier, Idaho, the Pleasant Valley Coal company at Castle Gate, Utah, and railway express cars at Tipton and Wilcox, Wyoming, before moving on to Texas.

His gang's downfall came when the Pinkerton Agency acquired a picture of "the Bunch," one that included Harry Longabaugh, known also as the Sundance Kid. Consequently, Butch and Sundance moved on to Argentina, where they took up ranching and engaged in a further series of robberies. Report finally had it that they were killed in a gun battle in Bolivia in 1909. But, as Mrs. Betenson adequately proves, Butch finally came home in 1925, via Mexico and Alaska after sixteen years without a crime. He died in the Northwest in 1937.

The value of this book lies in the ways in which all the evidence was gathered, sifted, and placed in proper perspective. There is no attempt at whitewashing him—"Butch was no angel." Rather, there emerges a figure-in-the-round, a warm, friendly person plunged into a career of crime before he matured intellectually. "I honestly believe he became a victim of his early choices, which led him into deeper trouble. . . . Butch Cassidy, my brother, paid a high price."

The book has been well designed, with good maps and a number of clear pictures nicely related to the text. We need more like it.

Allen D. Breck *is chairman of the department of history at the University of Denver and has written a number of books on religion and western history.*

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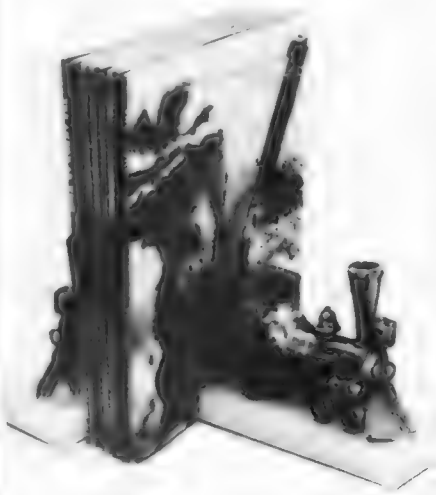

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Passage Through the Garden: Lewis and Clark and the Image of the American Northwest by John Logan Allen *(University of Illinois, Urbana, 1975; 412 pp., intro., illus., maps, charts, biblio., index, $18.50).*

REVIEWED BY RICHARD H. DILLON

AMERICA'S EPIC of exploration continues to generate books—good books, mostly. Hard on the heels of Marshall Sprague's *So Vast, So Beautiful a Land* and the National Park Service's sourcebook *Lewis and Clark* follows this useful addition to our shelves. The author pays tribute to Bernard DeVoto for inspiration and Don Jackson (that prince of bibliographers) for making his research easier. His footnotes indicate his indebtedness also to Abe Nasatir's excellent, but neglected work, *Before Lewis and Clark*. The general story of Meriwether Lewis's Corps of Discovery has been retold many times, but the subject still cries out for specialized studies. This is already being done, by Paul Cutright's *Lewis and Clark, Pioneering Naturalists*, and now in this book by John Logan Allen.

Allen relates the Lewis and Clark Expedition to the image, or myth, of the West and attempts to measure how the exploration changed the geographical image (both fanciful and real) of 1804. Included are such concepts as the West as the Garden of the World, and, happily, as an Eden straddling the fabled Passage to India. This easy water route across North America depended on a short portage between the heads of Mississippi-bound rivers and those falling into the Pacific; a skinny Rocky Mountain chain; a tight cluster of riverheads —the Missouri, Colorado, Rio Grande, and mysterious Columbia; and no basin-and-range country, such as the Sierra-Cascade *cordillera* or coast ranges, to get in the way.

The author's examination of images is skillful, but the account bogs down a bit in geographical and cartographical fine points, and in repetitiousness. And the author simply does not write as well as Marshall Sprague. Still, 'tis a good book, for all that.

Richard H. Dillon *is author of* Siskiyou Trail.

The Gun in America: The Origins of a National Dilemma by Lee Kennett and James LaVerne Anderson *(Greenwood Press, Westport, Conn., 1975; 339 pp., preface, illus., biblio., notes, index, $12.95).*

REVIEWED BY SIDNEY B. BRINCKERHOFF

THE RIGHT of civilians in the United States to own and bear firearms has long been established by tradition and in the law. Beginning in the earliest colonial times, the need for protection and the hunting of game made the use of firearms a necessity. This need was created by an agrarian, frontier experience, which was in direct contrast to the Europe from where the first settlers came, where the ownership of weapons was under control of the crown and denied most of the populace.

The authors, both Ph.D. graduates of the University of Virginia, carefully point out that their work is neither a history of American firearms nor is it a proposed solution to the "gun problem" in America. Instead, the book is essentially a study which measures the gun as an ingredient in our national experience and analyses why and in what ways it has become both a fixture and a source of controversy in American life today. Historical and chronological in approach, *The Gun in America* is a solid contribution not only to knowledge but to our understanding of a complex social issue which has been too long the victim of extremist writings without the benefit of balanced historical analysis.

Thoroughly researched and clearly written, the study presents several conclusions which appear valid and reflect on larger cultural problems facing the United States. Of these the convention that the present controversy over the private ownership of firearms is based partly on a difference of attitudes between rural and urban citizens is the most revealing and useful. The historical roots of this split are well drawn.

For students of the American frontier experience, this book should be required reading.

Sidney B. Brinckerhoff *is director of the Arizona Historical Society and author of two books on weapons in the West.*

Kinsey, Photographer
(Continued from page 53)

to his patient willingness to wait for the kind of transient light he knew exactly how to use properly.

His eventual determination to photograph in the woods with a heavy eleven-by-fourteen-inch camera and awkward glass plates underscored his seriousness and strength of purpose. Sure that only such equipment would allow him to reproduce the images he saw around him, he allowed no difficulty in their use to defeat him.

We are ill-prepared today to understand the rigors of that decision to carry a heavy plate camera into the forest, accustomed as we are to small cameras slung around our necks and automatic equipment to lighten the burden of judgment. Bohn and Petschek understand this problem; indeed they understand most of the Kinseys' problems. They perceive in their lives and their work a matchless integrity, a purity of execution, a sharply focused determination to make superior photographs. They sense in the Kinseys' photographs a loyalty to purpose uncommon in photographic history and a loftiness of vision supported by boundless talent. They see in this little man—he was but a few inches over five feet—a towering figure among frontier photographers in the United States. They are anxious to present him as one of America's greatest photographers: "There is absolutely no doubt that Darius was a genius with the camera. *Was he also the greatest practitioner in the entire history of American photography?*" Although historians are not yet ready to answer so fateful a question, we think he was not. Room for further discoveries and additional judgments are still required.

Darius Kinsey photographed steadily for fifty years, a hard-working commercial photographer of his time. He photographed *only* to make a living and he believed deeply in returning just value —he knew no other way. He worked like a slave—every day of the week except Sundays, for he and his wife were deeply religious. He began his life's work as his coworkers did, as a portrait photographer picturing his neighbors and friends, but finding his ultimate subjects among the great trees of the Pacific Northwest and the loggers who harvested them. If the Kinseys, Darius who made negatives and Tabitha who developed and printed them so superbly, thought of themselves as artists, they never spoke or wrote of it. They sought no widespread recognition, nor did they receive much of it, the major such acknowledgment taking the form of a request in 1899 by the World's Fair Commission to furnish photographic views of the Washington forest and logging scenes for the Paris Exposition of 1900. This accolade acknowledged in the *Skagit County Times* read, "This action is in recognition of the great superiority and excellence of Mr. Kinsey's work as an artist and is in itself no mean award of merit."

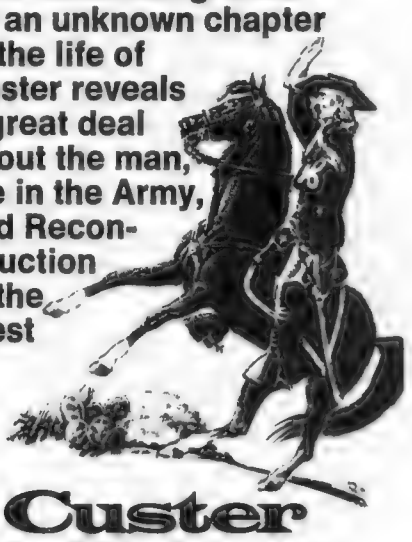
One moving instance of the price the Kinseys paid for such zeal is revealed in Tabitha's rigid insistence that she wear white gloves on every social occasion in which strangers might see her hands. Stained brown by the photographic chemicals she used, she would not allow any speculation that she was a "secret smoker" to gain currency. How deeply human this pathetic gesture of proud vanity!

Many monographs on early American photographers are finding their way into print as the interest in them mounts. These two volumes on *Kinsey, Photographer* will materially raise the standards for such work in the future. For its excellence this work deserves a long, useful life. Bohn and Petschek have honored a couple clearly worth their ardor. To this reviewer, then, their evident idolatry as well is both credible and pardonable.

When this remarkable work has paid for the investment required to bring it to life, it is hoped that a way will be found to offer it again at a popular and more affordable price than $150. Darius and Tabitha both deserve truly wide recognition of their unforgettable record, as do their devoted admirers, Dave Bohn and Rodolfo Petschek.

Robert A. Weinstein *is an authority and consultant on the history of photography in the United States. His book on Puget Sound maritime photographer Wilhelm Hester will be published by the University of Washington Press later this year.*

This fascinating book on an unknown chapter in the life of Custer reveals a great deal about the man, life in the Army, and Reconstruction in the West



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BOOKS IN BRIEF

By Larry Zelenak

Texas Heartland: A Hill Country Year by Jim Bones, Jr., and John Graves *(Texas A & M University, College Station, 1975; 106 pp., illus., $21.50).*

Jim Bones is a nature photographer of great perception and sensitivity. This all-color collection of his interpretations of the Texas hill country is largely a study in patterns—patterns of scales on the back of a water moccasin, of veins in a fallen leaf, of ripples in a tiny stream, of the dew-bejeweled strands of a spider's web, and of the passing and returning of the seasons.

Those Kings and Queens of Old Hawaii by Paul Bailey *(Westernlore Press, Los Angeles, 1975; 381 pp., illus., biblio., index, $11.95).*

Of all the United States, only Hawaii can boast a palace and a throne room, relics of a royal past. The story of Hawaii's monarchy is an engrossing one, and this volume tells it all.

High on the Wild with Hemingway by Lloyd Arnold *(Caxton, Caldwell, Idaho, 1975; 343 pp., illus., $100.00).*

Lloyd Arnold was Ernest Hemingway's close friend for over twenty years. In this book, first published in 1968 but now reissued in a deluxe, slipcased, limited edition of one thousand, he tells of Hemingway's life of hunting and fishing in Idaho.

Mount Hood: Portrait of a Magnificent Mountain by Don and Roberta Lowe *(Caxton, Caldwell, Idaho, 1975; 119 pp., illus., map, index, $25.00).*

Don Lowe's photography does full justice to Oregon's Mount Hood—one of the most beautiful peaks in North America—in this impressive large-format volume. The accompanying text by Roberta Lowe provides an interesting and often amusing account of the mountain's human and natural history—if one can stop looking at the pictures long enough to read it.

Discovering the California Coast by the editors of Sunset Books *(Lane, Menlo Park, Calif., 1975; 288 pp., illus., maps, biblio., index, $14.95).*

Primarily a picture book, this volume explores California's varied 1,100-mile coastline in all its facets, including its scenic attractions, history, geology, and ecology. Visitors will find it an admirable guide book, while those already familiar with the region will be entertained by the fine color photographs and wealth of information.

New Mexico: Gift of the Earth by Russell D. Butcher *(Viking, New York, 1975; 128 pp., illus., map, biblio., chronology, $16.95).*

In a chatty, informal style, Russell D. Butcher describes the land and history of New Mexico, from the prehistoric Indian cliff dwellers to the threat posed by strip mining today. His seventy-two color photographs leave no doubt as to why New Mexico has been dubbed "The Land of Enchantment."

Rivers of the Rockies by Boyd Norton *(Rand McNally, Chicago, 1975; 160 pp., illus., $19.95).*

The rivers of the Rockies are special, the author explains, because "they still run pure, free, and wild." This book celebrates those rivers through text and color photographs, following them as they grow from trickles at the edges of snowfields to awesome torrents roaring through chasms thousands of feet deep.

Yesterday's California by Russ Leadabrand, Shelly Lowenkopf, and Bryce Patterson *(E. A. Seeman, Miami, 1975; 272 pp., illus., maps, $14.95).*

The authors of this picture book don't pretend to have compiled a definitive history of the Golden State, but their potpourri of more than five hundred old photographs and accompanying captions nevertheless makes for hours of enjoyable reading.

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Guest Instructors: Ranger-guides, museum staff members, and local archaeologists will supplement the instruction at various points.
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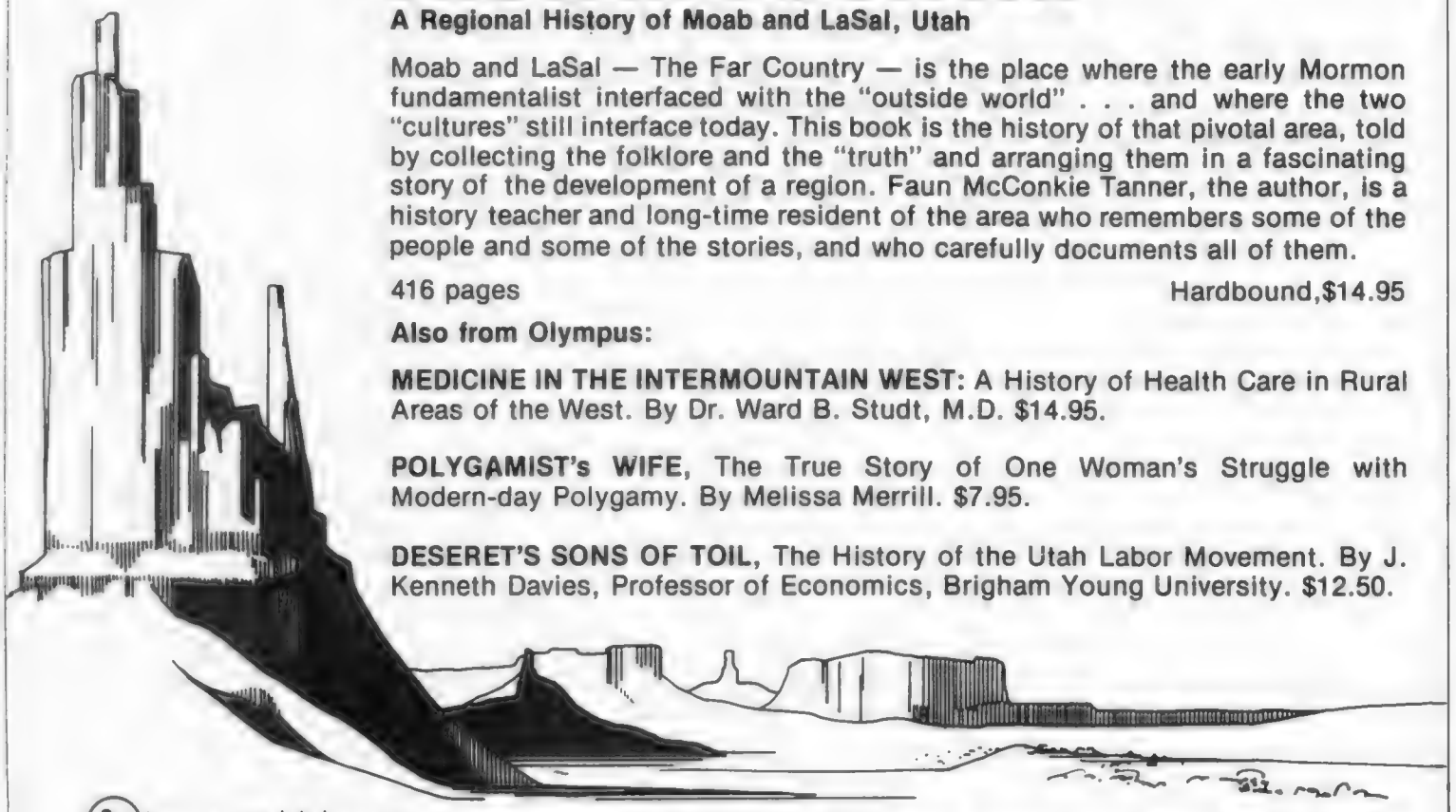

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FLUTTERING AFTER VILLA

(Continued from page 23)

Dargue and Foulois were greeted on the southern verge by several grim-looking soldiers waving rifles. After advising Dargue he'd best for safety's sake join the other plane, Captain Foulois stepped down with a firm tread and the crowd parted before him.

As Dargue took off, however, the excited Carranzistas began firing after him. Foulois remonstrated briskly with the soldiers and found himself their prisoner as the muttering crowd surrounded them. The subsequent march to the Chihuahua jail was extremely perilous. Bloodthirsty bystanders attempted repeatedly to provoke the prisoner into an overt act which would incite the mob to tear him to pieces.

Relatively secure inside the jail, Foulois began a persuasive Tex-Mex palaver with successively higher levels of authority until he reached the commandant, who affably released him and provided an escort to protect the Americans and their aircraft.

But in the meantime, things had reached a very hairy state at the northern airfield. The crowd pressed close to the two aircraft and began malicious experimentation—touching cigarettes to fabric, undoing nuts from bolts, snipping, picking. Seeing the situation out of control, Carberry and Dargue agreed to flee to a nearby American-owned mine smelter.

Carberry got off first, successfully, but his prop-blast so angered the crowd that they legged it after Dargue, heaving stones. Just as his Jenny arose, a large section of fabric behind the cockpit peeled off and critically wrapped itself round the tail surfaces. Heart thumping, Dargue glided to a straight-ahead landing.

The mob would now surely have destroyed the aircraft had it not been for the arrival of a Chihuahua photographer with his formidable equipment. "Please, senores! Wait until I have captured this gringo and his machine in my camera!"

Dargue desperately delayed events by fussily moving the photographer about to gain the best picture. And then Foulois, Dodd, and the protective Carranzistas providentially arrived. All hands turned to in repairing the plane (the rudder was braced with a wagon wheel rim), and when the Jenny was primped up, the photographer made his picture.

With their planes stored safely at the smelter, the four flyers spent the night at the American consulate. Foulois has reported that Chihuahua newspapers headlined: ENTHUSIASTIC RECEPTION TO THE AMERICAN AVIATORS.

In the morning both aircraft departed for headquarters, but Carberry and Dodd—in a very American ploy—could not resist one last swing over the city at a respectable altitude.

Looking down, they saw a broad scattering of grayish-white puffs. The rurales were saluting them with potshots! Luckily, none took effect.

On April 20 the American Air Force, which by then had withered to a shaky two-plane outfit, was ordered back to Columbus. The Punitive Expedition, whose recent battles had all been with Carranzistas, had passed its useful stage. It was a matter of either withdrawing or facing full-scale warfare with Mexico. European priorities fortunately precluded consideration of the latter.

Back at Columbus, Captain Foulois saw to it that the two remaining JN-2s were condemned. In fact, he later reported, the pilots put a match to them to insure that the dilapidated crates could not be used again.

The 1st Aero Squadron's month in Mexico was a technical fiasco, but surely humanly heroic. As a result of its publicity, and enthusiastic army staff reports on what might have been, had the proper equipment been available, the vital congressional logjam of appropriations was finally breached. In August 1916 over $13 million was set aside for military aviation, and soon decent materiel began arriving for the fledgling air force—160-horsepower aircraft, automatic cameras to compile strip maps, Lewis machine guns, bombs. That was when our doughty airmen began to put the *POW* into American air power.

K. C. Tessendorf *is a Washington, D.C., writer whose historical articles appear in many nationwide publications.*

HETCH HETCHY

(Continued from page 52)

thing you can do for Yosemite Valley is go somewhere else. Each foot that falls packs a little more of the valley floor until the flowers no longer bloom in the early summer along the banks of the Merced.

But we can drain Hetch Hetchy.

Incredible. Another Yosemite Valley already within the boundaries of the National Park, this one undeveloped, free of motels and roads, untouched—in fact, unseen, since its bottom is 250 feet under the water that tomorrow might bubble from the drinking fountain in a Montgomery Street office.

Dry Hetch Hetchy can be what Yosemite Valley isn't: an untouched valley, a haven for the walker, a quiet, easily accessible place for the family to camp. It's almost too good. If the water-mad city fathers of San Francisco hadn't fulfilled their lust at the turn of the century, surely Hetch Hetchy would now be, like its sister, an over-built resort complex. But, protected as it is by all that water, we can have a virgin valley to go along with the scarred one—a Yosemite II, a recreation resource of untold value and beauty.

There are other, more appropriate places to store our water, other locations for the power generators. When the O'Shaughnessy Dam closed the mouth of Hetch Hetchy Valley, it was, no doubt, a great and grand undertaking. But now we casually construct much larger facilities—for example, just downstream on the same Tuolumne River is the Don Pedro reservoir, six times as large as Hetch Hetchy Lake and in a much more felicitous place. Less than two hundred feet more water in Don Pedro would not only spin our relocated generators but preserve gravity-fed water in San Francisco.

It can be done. In ten years from the date of the ceremony, the ribbon-cutting or plug-pulling or whatever, in just ten years Hetch Hetchy will be a place. In thirty years a beautiful one, and in the lifetime of our children only the studious expert will be able to tell that once it had another use.

In the first months there would be a great wet mud flat washed by the waters of the rivers and streams that keep the valley full now. Then weeds, their seeds falling from what is now the waterline of Hetch Hetchy, and pine cones and black and golden acorns.

The materials that form what silt is carried by the Tuolumne are not particularly rich. Decomposed granite is the main ingredient, plus some organic material. The floor of the valley, Park Service naturalists estimate, may have two or three feet of this new silt on it, held from washing down by fifty years of the O'Shaughnessy Dam. In it would grow many of the plants that were inundated. Others would wait while the river made new banks for the willows and the native ferns.

In only twenty years, the scientists assure us, the valley would have shade trees and a settled down river. We would have "the appearance of being natural," trees and all, except for the dark algae on the granite cliffs, in just forty years. In a little under a hundred there would be mature oaks and tall Ponderosa pines. Now I'll bet most people would think we have done more damage than that. Isn't nature wonderful?

This is not a completely new idea, just an uncommon one. And it would not be a particularly good idea to think about, if it were a serious tampering with San Francisco's water supply or one of its really few sources of income outside the tax base. It is not those things, just an uncommon idea whose time may have arrived.

Hetch Hetchy can stand for our children, even for ourselves in our later years, a monument to our essential sanity and sense erected now, in a time when we might properly doubt those things.

Tom DeVries *of Mariposa, California, is a writer and a former reporter for San Francisco's public television station KQED.*

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Membership in the Western History Association is open to anyone interested in the history and culture of the American West. Inquiries should be addressed to the Secretary, William D. Rowley, Department of History, University of Nevada, Reno, Nevada 89507. Membership is on a calendar-year basis and includes THE AMERICAN WEST and WESTERN HISTORICAL QUARTERLY. Annual dues are: Regular Member $16.00; Sustaining Member $30.00; Student Member & Emeritus Member $10.00 (includes only the WESTERN HISTORICAL QUARTERLY and Annual Conference material); Sponsoring Member $100.00 (Institution); Life Member $300.00, paid in a twelve-month period. Individuals or institutions not wishing to become members may subscribe directly to either THE AMERICAN WEST or the WESTERN HISTORICAL QUARTERLY at regular subscription rates.

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Forthcoming in THE AMERICAN WEST

Although the famous outlaw Robert LeRoy Parker lived well into the twentieth century, in 1897 nineteen men claimed a hand in killing him—and had a body to prove it, as Doris Flack explains in **Butch Cassidy: Dead and Alive.**

The tales of Butch's death were greatly exaggerated, but the same cannot be said of reports of the demise of Castle Gate, Utah, the site of his most daring robbery. The old coal-mining town perished last year, a victim of the energy shortage. Its story is told by Steve Yankee in **Ghosts of the Past Die Hard.**

In a photographic essay on a different part of Utah's heritage, Jan Brunvald documents **The Spectrum of Early Mormon Houses.** The contributions of the early Latter-Day Saints to western architecture ranged from their elegantly simple, symmetrical brick homes to the ingenious "polygamy pits" found in some and used for hiding from U.S. marshals. In two other forthcoming articles, Jerry Litwak tells how a pig led British and American troops on Puget Sound's San Juan Islands into **The Almost Boar War,** and Sir Ronald Campbell relates a **Narrative of a British Diplomat's Journey from Washington to the Pacific Coast.**